



Highlights on health in Azerbaijan 2005

Highlights on health give an overview of a country's health status, describing recent data on mortality, morbidity and exposure to key risk factors along with trends over time. The reports link country findings to public health policy considerations developed by the WHO Regional Office for Europe and by other relevant agencies. *Highlights on health* are developed in collaboration with Member States and do not constitute a formal statistical publication.

Each report also compares a country, when possible, to a reference group. This report uses the 25 countries with low child mortality and low or high adult mortality, designated Eur-B+C by WHO, as the reference group. Eur-B+C comprises Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Poland, Republic of Moldova, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine and Uzbekistan.

To make the comparisons as valid as possible, data, as a rule, are taken from one source to ensure that they have been harmonized in a reasonably consistent way. Unless otherwise noted, the source of data in the reports is the European health for all database of the WHO Regional Office for Europe. Other data and information are referenced accordingly.

Keywords

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Summary: findings and policy considerations

Life expectancy

According to figures compiled by WHO for all Member States, a person born in Azerbaijan in 2003 can expect to live 65 years on average: 68 years if female and 62 years if male. Life expectancy in Azerbaijan is three years lower than in Armenia and six years lower than in Georgia, which suggests that the health of the population is poorer comparatively.

As the length of life increases, older people can respond with lifestyle changes that can increase healthy years of life. Correspondingly, health care systems need to shift towards more geriatric care, the prevention and management of chronic diseases and more formal long-term care. Since people are living longer, measures to improve health and prevent disease need to focus on people of working age.

Ageing and employment policies (OECD, 2004)

What are the main risk factors for disability in old age and how can disability be prevented? (Health Evidence Network, 2003a)

Infant mortality

Nationally reported data and WHO estimates for 2002 show that of every 1000 live births in Azerbaijan, there is a probability that about 23 children will die before they are 5 years old. The Millennium Development Goal target for the under-5 mortality rate for Europe and central Asia is 15 deaths per 1000 live births by 2015.

Antenatal care is one of the most important services in health care. Nevertheless, it can be expensive, and interventions may be excessive, unneeded and unproven. A simplified model of antenatal care, based on evidence of benefit, is available.

Managing newborn problems: a guide for doctors, nurses and midwives (WHO, 2003a)

What is the efficacy/effectiveness of antenatal care? (Health Evidence Network, 2003b)

What is the effectiveness of antenatal care? (Supplement) (Health Evidence Network, 2005)

Maternal mortality

Between 1990 and 2002, the maternal mortality rate increased by almost 32%. By 1995, the rate peaked at 41 maternal deaths per 100 000 live births, and it then fell by almost half to reach the 2002 level. For Azerbaijan to reach its Millennium Development Goal by 2015, the maternal mortality rate has to fall another 81%.

More important than reaching the exact Millennium Development Goal for maternal mortality rates is that countries take concrete action to provide women with access to adequate care during pregnancy and childbirth. There are evidence-based initiatives proven to bring down the rates.

The WHO reproductive health library, version 6 (WHO, 2003b)

Main causes of death

Mortality rates in Azerbaijan are generally about 25% lower than the Eur-B+C average rates, but are 55% higher than the Eur-A average rates. For adults, the mortality rate is considerably below the Eur-B+C average rate, while the rate for children is above the average rate.

Preventive care, delivered through a country's primary care system, can reduce all-cause mortality and premature mortality, particularly from CVD.

A strategy to prevent chronic disease in Europe: a focus on public health action: the CINDI vision (WHO Regional Office for Europe, 2004a)

Towards a European strategy on noncommunicable diseases (WHO Regional Office for Europe, 2004b)

What are the advantages and disadvantages of restructuring a health care system to be more focused on primary health care services? (Health Evidence Network, 2004)

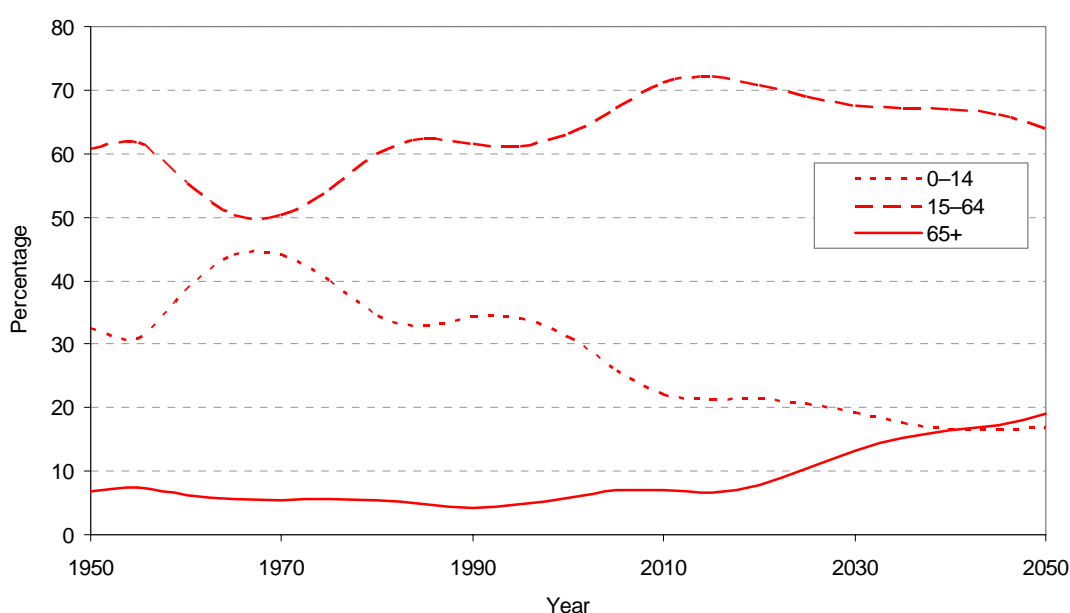
Selected demographic and socioeconomic information

Population profile

In mid-2003, Azerbaijan had about 8.2 million people. About 50% of them lived in urban areas, which is below the Eur-B+C average for that year.

The percentage of the population 0–14 years old was relatively steady during the 1980s, but fell from about 34% in 1990 to 27% by 2003. The percentage is well above the Eur-B+C average. Also, the percentage of Azerbaijan's population over 65 years old is well below the Eur-B+C average. By 2030, an estimated 13% of Azerbaijan's population will be 65 years of age and older (Annex. Age pyramid).

Percentage of the population aged 0–14, 15–64 and 65+ years, Azerbaijan, 1950 to 2050 (projected)



Source: United Nations (2005).

The birth rate in Azerbaijan was slightly above the Eur-B+C average in 2003. Also, natural population growth in Azerbaijan for that year is positive and above the Eur-B+C average, and net migration is about zero and below the Eur-B+C average.

Selected demographic indicators in Azerbaijan and Eur-B+C, 2003 or latest available year

Indicators	Azerbaijan	Eur-B+C		
	Value	Average	Minimum	Maximum
Population (in 1000s)	8234.1	–	–	–
0–14 years (%)	26.9	–	–	–
15–64 years (%)	66.4	–	–	–
65+ years (%)	6.7	–	–	–
Urban population (%) ^a	50.2	63.7	25.0	73.3
Live births (per 1000)	13.8	12.8	8.6	27.1
Natural population growth (per 1000)	7.9	0.8	–7.49	23.0
Net migration (per 1000)	–0.2	1.8	–6.6	2.1

^a 2002.

Sources: Council of Europe (2005), WHO Regional Office for Europe (2005).

Socioeconomic indicators

Health outcomes are influenced by various factors that operate at individual, household and community levels. Obvious factors are, for example, diet, health behaviour, access to clean water, sanitation and health services. However, underlying health determinants of a socioeconomic nature also play a role in causing vulnerability to health risks. Here, the key factors are income, education and employment. Though moderately correlated and interdependent, each of these three determinants captures distinctive aspects of the socioeconomic background of a population and they are not interchangeable. Various indicators represent the key socioeconomic determinants of health.

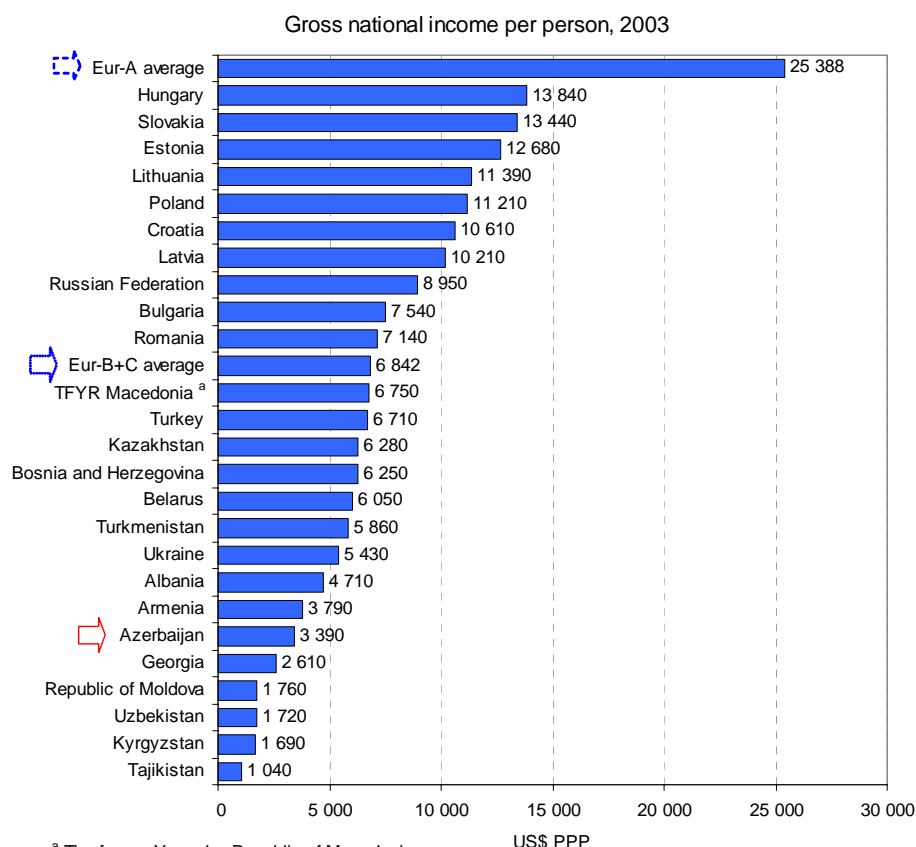
The following subsections give a profile of the key socioeconomic indicators for Azerbaijan, along with averages, where relevant, to permit comparisons with a reference group of countries.

Income: absolute poverty, relative poverty and income distribution

There is an income gradient affecting health: the poor generally suffer worse health and die younger than people with higher incomes. For instance, the latter are better able to afford the goods and services that contribute to health, for example, better food and living conditions.

People are considered to be in absolute poverty if their incomes are not sufficient to purchase very minimal goods and services. The World Bank currently uses an absolute poverty line of US\$ 2.15 and US\$ 4.30 income per capita per day to measure poverty in low- and middle-income countries of the WHO European Region (using 1993 international prices adjusted for purchasing power parity). While there is no certainty that the poverty lines measure the same degree of need across countries, the World Bank uses them as a constant to permit comparison. Many countries in the Region calculate their national poverty lines on the basis of a minimum consumption basket selected and priced according to the specific circumstances of the country.

In Azerbaijan, per person gross national income, adjusted for purchasing power parity (PPP), was US\$ 3390 in 2003, less than half the Eur-B+C average of \$6842.



Relative poverty is an indicator of income level below a given proportion (typically 50%) of the average national income. In high-income countries, there are far more pockets of relative poverty than of absolute poverty.

In 2001, relative to a national poverty line, 49.6% of the population in Azerbaijan was living in poverty. Using the World Bank's recommended benchmarks to measure absolute poverty in Europe, a household survey in Azerbaijan found that in 1995, 44.2% of people lived on US\$ 2.15 per day or less. A 2001 survey found the rate to have dropped to 33.4%. If the US\$ 4.30 poverty line is applied, the 1995 survey found 83.3% of people living in absolute poverty, by definition. The 2001 survey established the rate at 77.0% (World Bank, 2005).

Another measure of relative poverty in terms of income is the Gini index. This presents the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

In 2001, the Gini index for Azerbaijan was 36.5, among the higher indices in the Eur-B+C countries with data available. The Gini indices for 15 Eur-B+C countries, for 2000–2002, range from 26.1 for Bosnia and Herzegovina (2001) to 45.6 for the Russian Federation (2000) (World Bank, 2005).

Education

Education tends to enhance an individual's job opportunities. In so doing, it can improve income, which in turn affects health positively. Education can also give more access to knowledge about healthy behaviour and increase the tendency to seek treatment when needed. A lower level of education – independent of individual income – is correlated with the inability to cope with stress, with depression and hostility and with adverse effects on health.

School enrolment is an indicator of access to education. The secondary school net enrolment represents the percentage of the total population of official school age (defined nationally) that is enrolled in secondary schools.

In 2000, the percentage of school age children enrolled in secondary schools in Azerbaijan was below the average for Eur-B+C countries with data for that year: at 75.2% of the school age population, compared with a 81.2% average for Eur-B+C countries. In 2001, the rate in Azerbaijan rose slightly to 75.7%. The average net enrolment in Eur-A countries in 2000 was 88.5% (UNESCO, 2005).

Employment

Being employed tends to be better for health than being unemployed, except in circumstances where employment exposes the individual to physical injury or psychological stress. National unemployment rates and rates for particular sub-populations are monitored to assess the extent to which people have or lack access to opportunities that would enable them to earn an income and feel secure. Vulnerability to health risk is increased by long-term unemployment, that is, continuous periods without work, usually for a year or longer; the socioeconomic status of an individual and of his/her dependents can slide as the period of unemployment increases.

The nationally reported total unemployment rate in Azerbaijan was 1.3% in 2001, compared with the Eur-B+C country average rate of 12.9%, keeping in mind that national rates are based on estimates of people available and seeking employment and that countries have different definitions of labour force and unemployment (ILO, 2005).

Life expectancy (LE) and healthy life expectancy (HALE)

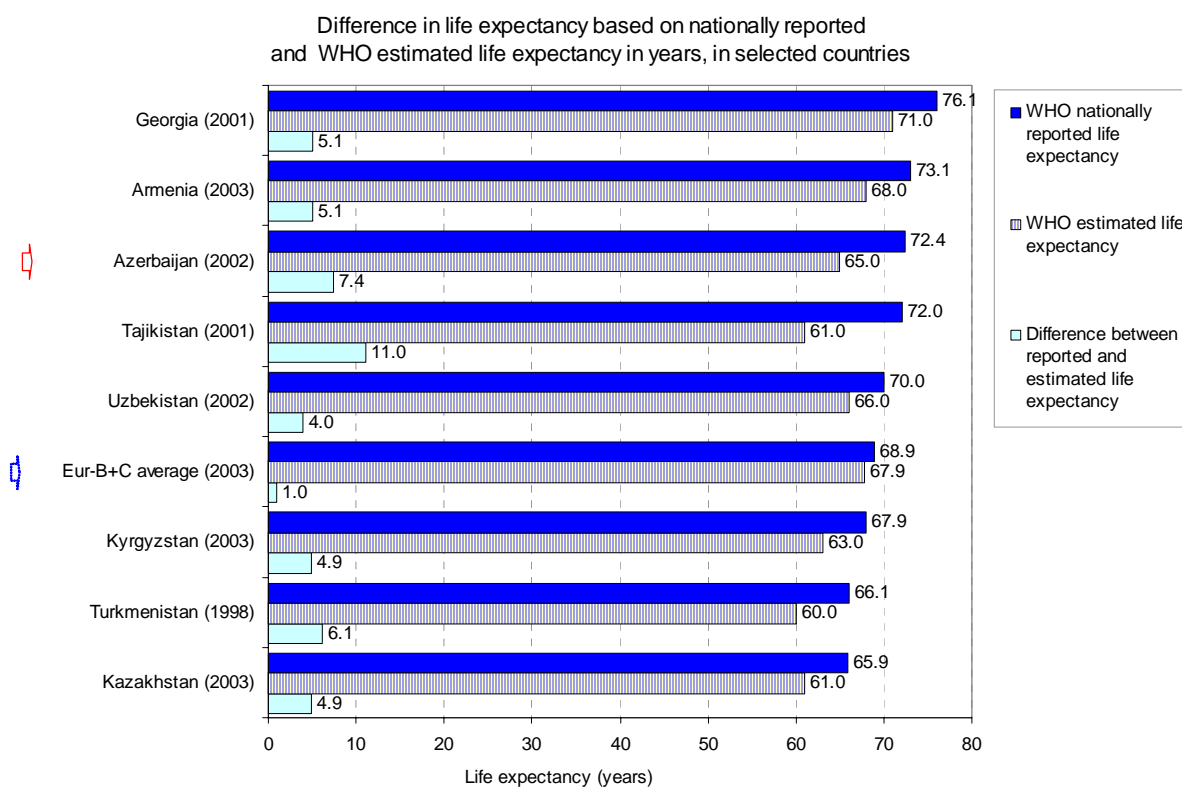
According to figures compiled by WHO (WHO, 2005) for all Member States (which are not necessarily the official statistics of Member States), to assure comparability, a person born in Azerbaijan in 2003 can expect to live 65 years on average: 68 years if female and 62 years if male. Life expectancy (LE) in Azerbaijan is three years lower than in Armenia and six years lower than in Georgia, which suggests that the health of the population is comparatively poorer.

It is important to ascertain which indicators to use in making comparisons with other countries of the Eur-B+C reference group. There are of two types of mortality data available: (1) nationally reported mortality statistics produced by Azerbaijan on the basis of regular registration of deaths by the statistical system and reported to WHO; and (2) the international mortality estimates produced by WHO, which aim to compensate for gaps in availability, comparability and other quality gaps in the nationally reported statistics.

In this context, the above WHO estimates are seven years lower than the official nationally reported LE figures for 2002, which are 72.4 years for both sexes combined: 75.0 years if female and 69.8 years if male. The difference is due mostly to under-registration of child mortality. The adult mortality data, however, is believed to be considerably more reliable. Here, it is assumed that the nationally reported data reflect broadly, but sufficiently accurately, the main pattern of mortality in Azerbaijan, if not always the levels. With these caveats, and because the nationally reported statistics can show trends and detail by all age- and sex-specific population groups, the nationally reported mortality statistics are used almost exclusively in this report. However, these are complemented by the available WHO estimates, to help assess the health situation, in particular as it relates to children's health.

A problem related to the completeness of reporting deaths, which may not be obvious to the user of these reports, is whether the cause of death is identified and coded correctly in the death certificates that form the basis for mortality statistics. As in the other Caucasus countries and central Asian republics, there are indications of misclassification of causes of death that are difficult to quantify. Inevitably, these affect the results of the nationally reported statistics, particularly where international comparisons are concerned. With these comments in mind, the basic facts about mortality in Azerbaijan can be summarized as follows.

The official nationally reported LE in Azerbaijan is about 3.5 years above the official nationally reported Eur-B+C average of 68.8 years. However, the WHO estimate puts it about 3 years below the Eur-B+C average of 68 years that is calculated on the basis of WHO estimates exclusively. Moreover, LE is likely about 14.0 years below the Eur-A average of 79.0 years. This large difference can be interpreted as a huge potential for middle- to long-term improvement in Azerbaijan, provided that the best available knowledge and practices are appropriately implemented.

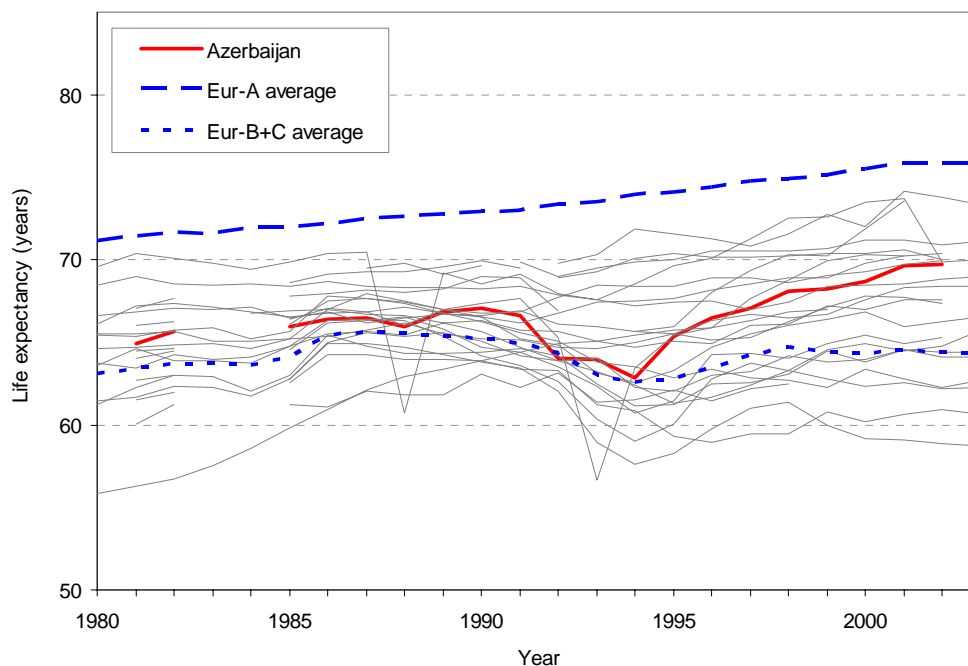


The trends (over time) show that back in the mid-1980s, the nationally reported LE in Azerbaijan was close to the Eur-B+C average of about 70 years. Since then, it has fluctuated more strongly than the average, as a result of the economic and social changes in people's well-being and behaviour and the effect of these changes on the functioning of the health system.

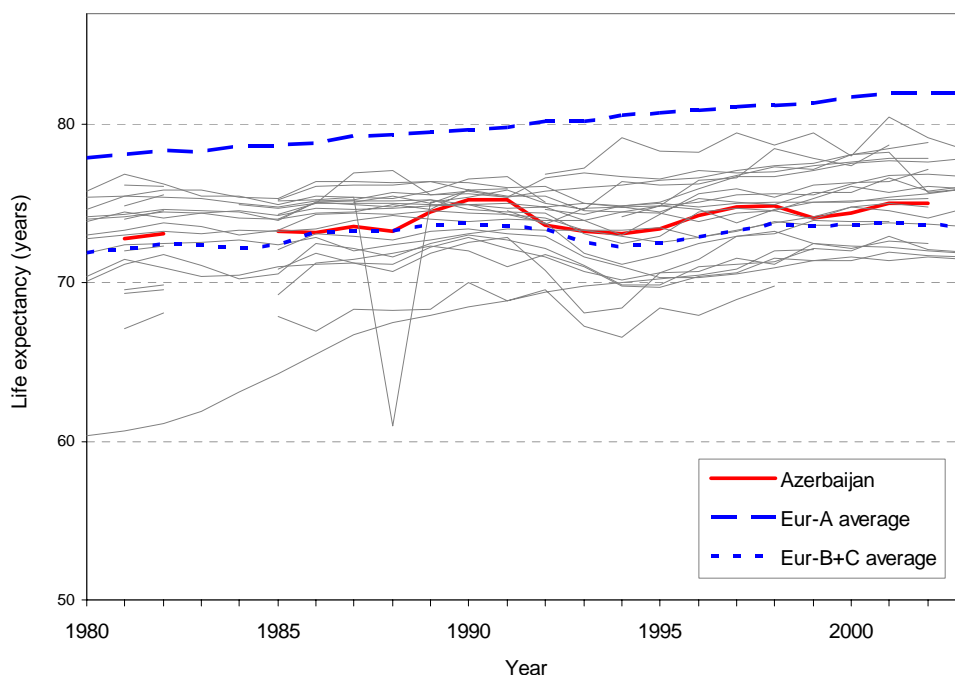
Concerning the trends (over time) in mortality, one should also keep in mind that the mortality figures in the Commonwealth of Independent States (CIS) peaked around 1994–1995 (in the aftermath of the geopolitical collapse of the former Soviet Union). Therefore the trends since 1995 in CIS countries are generally more favourable than those for the whole period 1990–2003. This favourable bias is compounded to some extent by the casualties of the conflict with Armenia that has been going on since 1988 and the uncertainties of the population base for the mortality calculations in the period before the last census, in 1999.

The female–male difference in LE in Azerbaijan is 5.1 years and is relatively low, as the Eur-B+C-average for the difference is 9 years and the corresponding Eur-A-average is 6 years. The smaller difference between sexes in Azerbaijan is the result of the poorer LE for females.

Life expectancy at birth for males, Azerbaijan, Eur-A and Eur-B+C averages, 1980 to latest available year



Life expectancy at birth for females, Azerbaijan, Eur-A and Eur-B+C averages, 1980 to latest available year



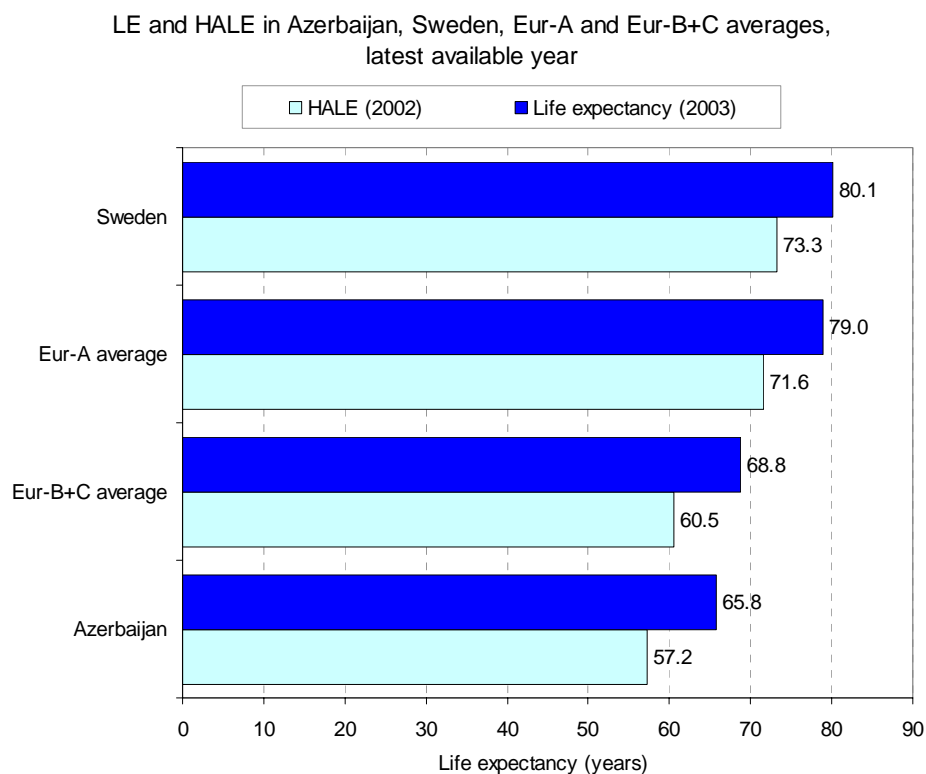
Healthy life expectancy

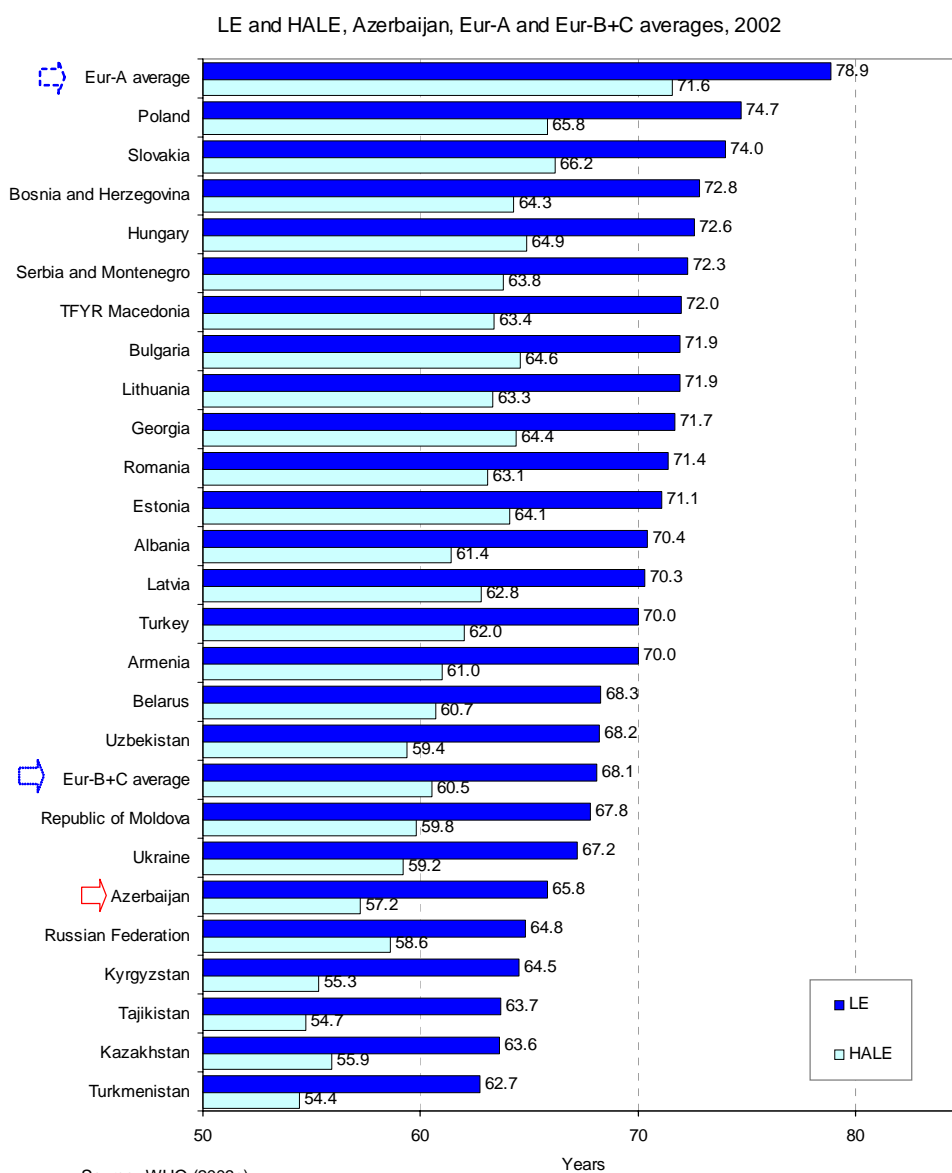
In addition to LE, it is increasingly important to know the expected length of life spent in good health. WHO uses a relatively new indicator for this purpose – healthy life expectancy (HALE), subtracting estimated years of life spent with illness and disability from estimated LE. WHO has produced HALE estimates that should be used in conjunction with the above-mentioned WHO estimates of total LE and not in conjunction with the nationally reported LE statistics.

WHO estimated (WHO, 2004) that, for the year 2002, people in Azerbaijan have 57.2 healthy years on average: 58.7 years if female and 55.8 years if male. This is 14.4 years shorter than the Eur-A average of 71.6 years and 3.3 years shorter than the Eur-B+C-average of 60.5 years. The best achievement in the Region is 73.3 years, for people living in Sweden: 74.8 years if female and 71.9 years if male.

At 60 years of age, the HALE in Azerbaijan is 12.4 years if female and 10.6 years if male, while in Sweden those estimates are 19.6 years if female and 17.1 years if male.

An alternate way to present the same concept is the expectation of life years spent in less than good health. In Azerbaijan this is 10.0 years for females and 7.2 years for males. The estimates for Sweden are 7.9 years for females and 6.2 years for males.





Burden of disease

The burden of disease in a population can be viewed as the gap between current health status and an ideal situation in which everyone lives into old age, free of disease and disability. Causing the gap are premature mortality, disability and certain risk factors that contribute to illness. The analysis that follows elaborates on the burden of disease in the population. The disability-adjusted life-year (DALY) is a summary measure that combines the impact of illness, disability and mortality on population health.

Main conditions

The following table has the top 10 conditions (disability groups), in descending order, that account for approximately 90% of the burden of disease among males and females in Azerbaijan. Cardiovascular diseases (CVD) and neuropsychiatric conditions account for the highest burden of disease, both among males and females. Because mortality from neuropsychiatric conditions is minor, disability in daily living comprises the bulk of their burden on the population's health.

Ten leading disability groups as percentages of total DALYs for both sexes
in Azerbaijan (2002)

Rank	Males		Females	
	Disability groups	Total DALYs (%)	Disability groups	Total DALYs (%)
1	Cardiovascular diseases	21.4	Neuropsychiatric conditions	19.4
2	Neuropsychiatric conditions	14.3	Cardiovascular diseases	17.8
3	Respiratory infections	10.8	Respiratory infections	10.4
4	Infectious and parasitic diseases	9.1	Infectious and parasitic diseases	6.6
5	Unintentional injuries	6.8	Malignant neoplasms	6.3
6	Malignant neoplasms	6.3	Digestive diseases	5.5
7	Digestive diseases	5.1	Sense organ diseases	5.1
8	Perinatal conditions	4.8	Respiratory diseases	4.4
9	Respiratory diseases	4.7	Perinatal conditions	4.0
10	Sense organ diseases	3.7	Nutritional deficiencies	3.6

Source: Background data from WHO (2003c).

Main risk factors

The following table has the top 10 risk factors with their relative contributions (percentage of total DALYs), in descending order, to the burden of disease in the male and female populations of Azerbaijan.

According to the DALYs, tobacco and high cholesterol level place the greatest burden of disease on the Azerbaijan male population, and high body mass index (BMI) and high blood pressure place the greatest burden of disease on females.

Ten leading risk factors as causes of disease burden measured in DALYs
in Azerbaijan (2002)

Rank	Males		Females	
	Risk factors	Total DALYs (%)	Risk factors	Total DALYs (%)
1	Tobacco	11.9	High BMI	8.4
2	High cholesterol	7.9	High blood pressure	6.9
3	High BMI	7.2	High cholesterol	5.6
4	High blood pressure	6.4	Indoor smoke from solid fuels	3.5
5	Alcohol	6.3	Iron deficiency	3.2
6	Low fruit and vegetable intake	4.0	Physical inactivity	3.1
7	Physical inactivity	3.6	Low fruit and vegetable intake	2.9
8	Indoor smoke from solid fuels	3.2	Childhood and maternal underweight	2.7
9	Childhood and maternal underweight	2.8	Unsafe water, sanitation, and hygiene	2.1
10	Unsafe water, sanitation, and hygiene	2.0	Unsafe sex	1.8

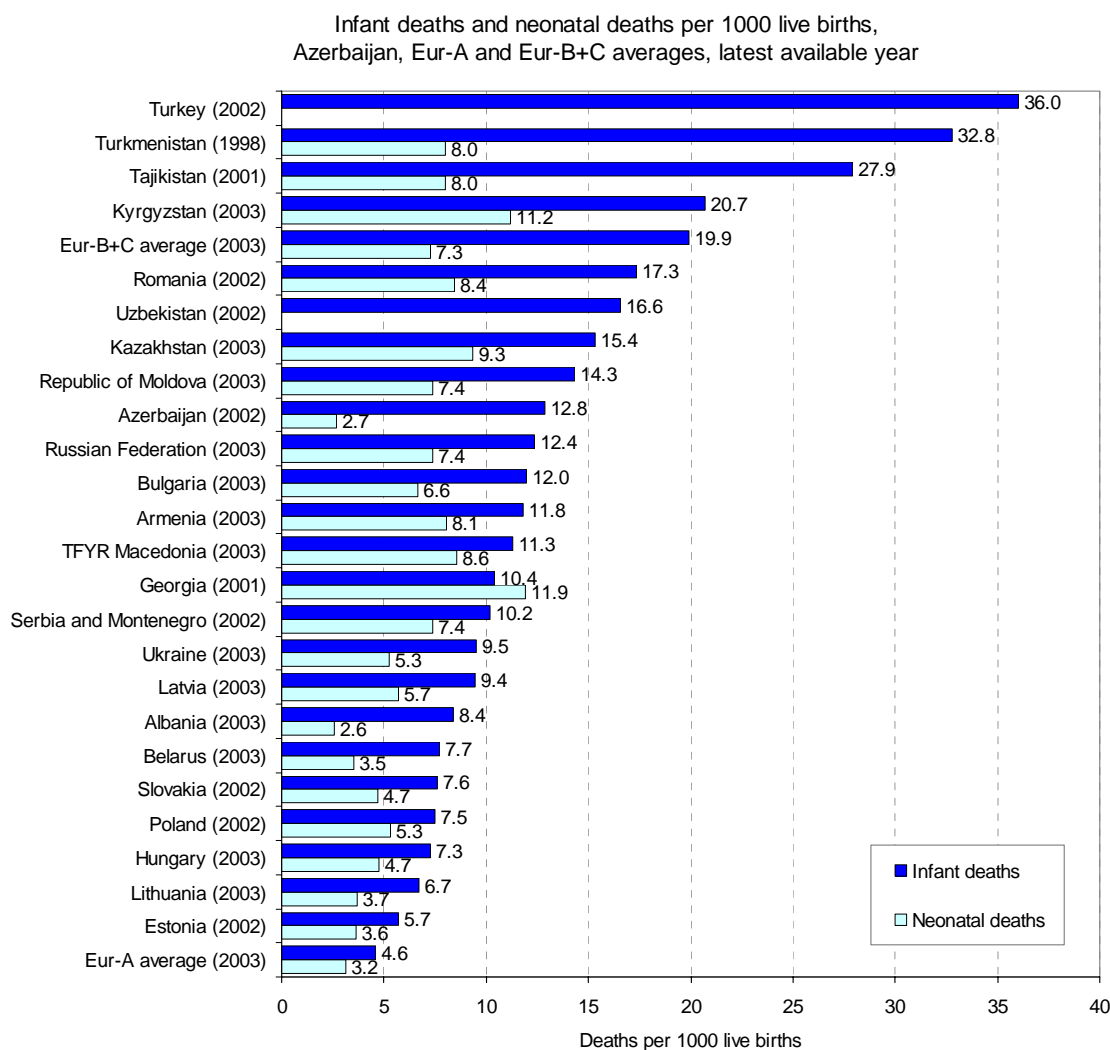
Source: Background data from WHO (2003c).

Mortality

Infant, neonatal and child mortality

National data and WHO estimates for 2002 show that out of every 1000 live births in Azerbaijan, there is a probability that about 23 children will die before 5 years of age (the Millennium Development Goal (MDG) for the under-5 mortality rate for Europe and central Asia is 15 deaths per 1000 live births by 2015). Adjusting for the known biases in national data (such as underreporting of vital statistics), WHO estimates Azerbaijan's latest probability to be 37 deaths under-5 per 1000 live births. Whether Azerbaijan in fact reaches the MDG by 2015, according to WHO estimates, is uncertain, as extrapolation of the current WHO estimates is not valid. The lowest WHO estimates for the Eur-B+C countries are for Estonia and Slovakia, each at 8 deaths per 1000 live births.

By 2002, the regular nationally reported infant mortality rate in Azerbaijan was about 13 deaths per 1000 live births. In comparison, in 2003, the Eur-B+C average was 19.9 deaths per 1000 live births, and the best achievement in the Eur-B+C group was for Lithuania, at 6.7 deaths per 1000 live births. Since, 1990, the infant mortality rate in Azerbaijan has been nearly halved, and the rate of improvement is larger than the Eur-B+C average.



Regular country reports on neonatal mortality for Azerbaijan present figures of about 3 neonatal deaths per 1000 live births, which are at the Eur-A average and are implausibly low for the current socioeconomic situation in the country.

As mentioned, in an attempt to estimate possible underreporting of mortality data in the official nationally reported statistics, WHO produces concurrent estimates by systematically analysing complementary information from various sources and statistical modelling. The following table compares the nationally reported estimates with WHO estimates. WHO's estimates make use of the best information available. Being of course only estimates, they take into account statistical uncertainties and have calculated ranges of statistical uncertainty. In particular, the lower boundary of such an interval of uncertainty can be interpreted to mean that nationally reported data below that boundary are likely underreported.

Comparison of key indicators of child and maternal mortality in Azerbaijan based on nationally reported data and WHO estimates to assure comparability

Indicator	Nationally reported ^a	WHO estimates
Infant mortality per 1000 live births, 2000 (MDG indicator)	13	61 ^b
Neonatal mortality per 1000 live births, 2000	3	36 ^c
Under-5 mortality per 1000 live births (MDG indicator)	23 (2002)	91 (77–104) (2003) ^c
Maternal mortality per 100 000 live birth, 2000 (MDG indicator)	18	94 ^c

Sources: ^a WHO Regional Office for Europe (2005), ^b WHO (2004), ^c WHO (2005).

The data show that nationally reported under-5 mortality in Azerbaijan is about a fourth of the estimated actual rate. As under-registration of child deaths mostly occurs in children under 1 year of age, this discrepancy indicates that infant mortality and neonatal mortality must be underestimated too. The table above confirms this expectation – the magnitude of the underreporting appears to be considerable.

In addition, WHO estimates that the under-5 mortality rate has not changed during the period 2000–2003, while the respective rate for the Region as a whole decreased at an average annual rate of about 3.5% (WHO, 2005).

Maternal mortality

Maternal mortality rates (MMR) and the Millennium Development Goal (MDG)

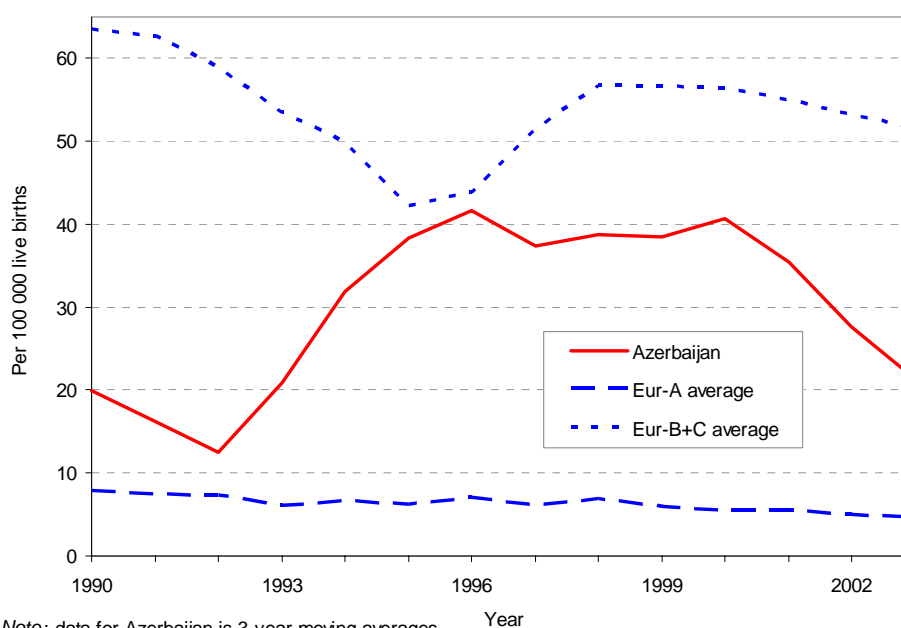
Despite the difficulties in accurately measuring MMR, nationally reported figures are accepted at face value relative to the MDG to improve maternal health – to reduce the MMR by 75% between 1990 and 2015. In some countries, the 2015 target may be equal to or lower than the average current MMR for high income countries in the European Region (the Eur-A 2001 average of five maternal deaths per 100 000 live births). Countries with 2015 targets lower than the current Eur-A average can be judged as having achieved or being likely to achieve the MDG (World Bank, 2004).

However, in some countries, MMR were higher in 2002 than they had been in 1990. Applying the 75% reduction to the 1990 baseline in these countries creates, in some cases, a 2015 MDG target that requires dramatic reductions in MMR before 2015. In these cases, more important than reaching maternal mortality targets is taking concrete action to provide women with access to adequate care during pregnancy and childbirth, initiatives that have proven to bring down MMR.

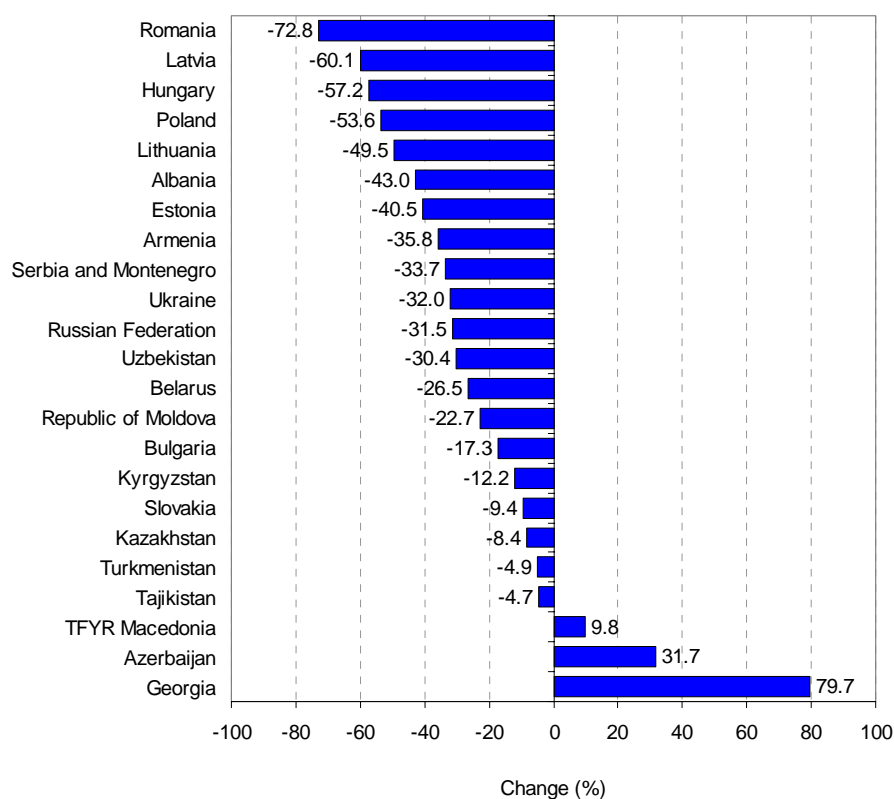
Maternal mortality is more difficult to ascertain, even in countries with strong registration systems. The level of underreporting in Azerbaijan is comparatively high. As judged by 3-year moving averages of nationally reported figures, to possibly smooth out random fluctuations, current MMR are back to the 1990 levels or a little higher.

Maternal mortality is an MDG indicator, which all countries have committed themselves to reduce by three quarters between 1990 (baseline) and 2015. Given the difficulties in ascertaining maternal mortality figures, a direct assessment of progress on the basis of the limited data available is not possible, but the data below indicate a lack of substantial progress.

Maternal mortality, Azerbaijan, Eur-A and Eur-B+C averages,
1990 to latest available year



Per cent change for maternal mortality (3-year moving averages),
1990 to 2002 or latest available year

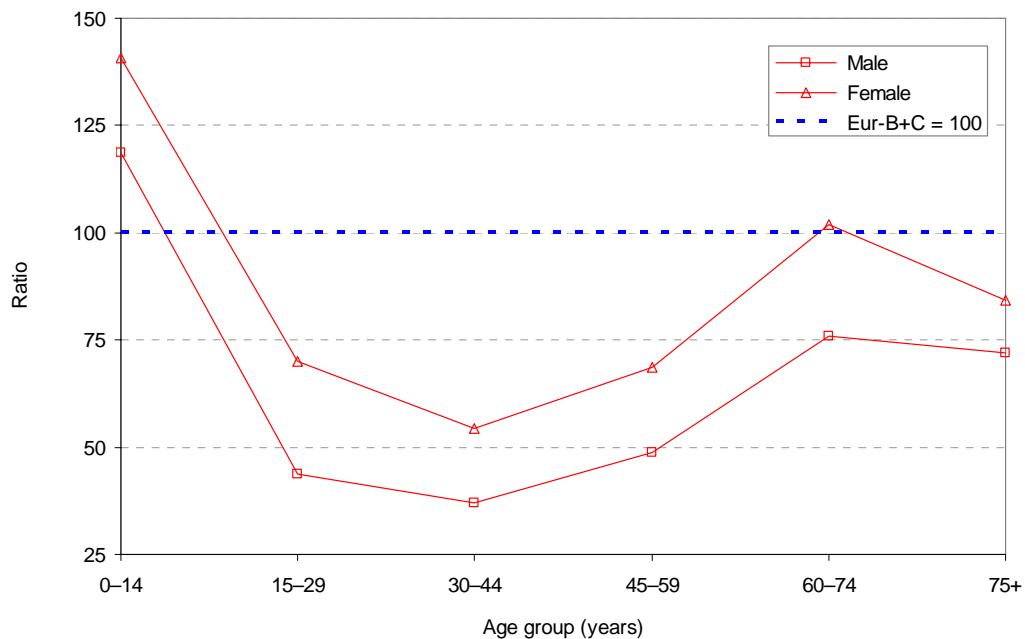


Between 1990 and 2002, Azerbaijan's MMR increased by almost 32%. However, its 1990 rate (about 16 maternal deaths per 100 000 live births) was among the lower rates in the Eur-B+C that year. By 1995, the rate peaked at 41.6 maternal deaths per 100 000 live births; it then fell by almost half to reach the 2002 level. Between 2002 and 2015 the MMR would have to fall another 81% to reach the MDG target, but at that point its rate would be lower than the current average MMR for Eur-A countries. Of the 22 maternal deaths reported in 2002, 2 were attributed to abortion.

Excess mortality

In this remaining part of the mortality analysis, nationally reported statistics are considered exclusively. In general, the mortality rates in Azerbaijan are about 25% lower than the Eur-B+C average rates, but are 55% higher than the Eur-A average rates (Annex. Selected mortality). In adults, the mortality rate is considerably below the Eur-B+C average rate, while in children it is above the average rate. With due consideration to completeness of data, this suggests that the level of adult health in Azerbaijan might be better than in several other CIS countries that suffer extremely high middle-age adult mortality.

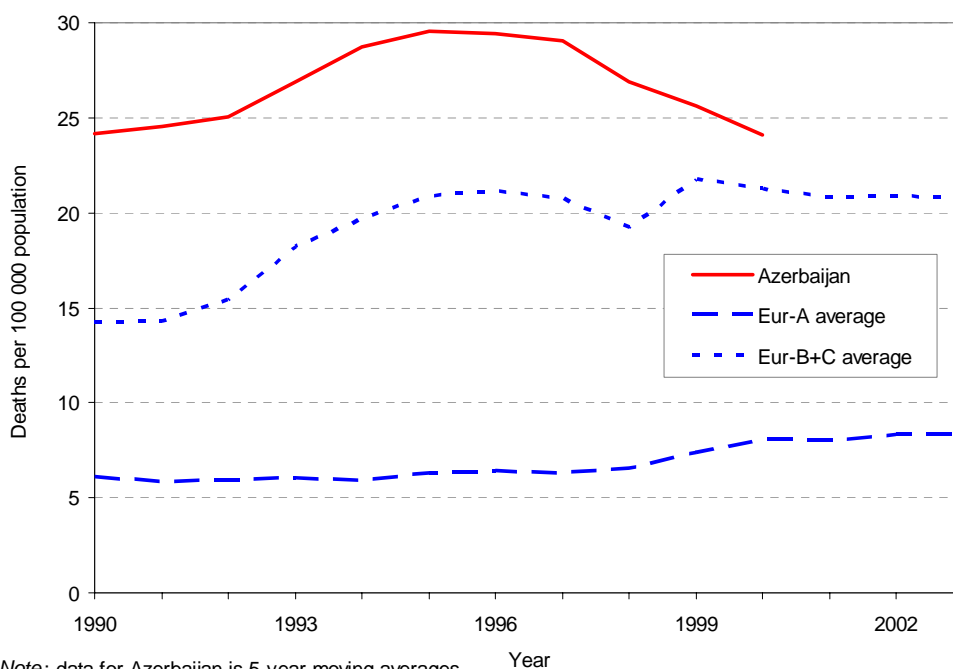
Total mortality by sex and age group in Azerbaijan in comparison with Eur-B+C (Eur-B+C = 100), 2003



An important observation to make is that, as with other southern CIS countries (Caucasus and central Asian republics), and in contrast to the northern CIS countries, Caucasian republics and Baltic states, there is no excess mortality in Azerbaijan from external causes of death, in comparison with the Eur-B+C average. In people more than 14 years of age, mortality from external causes in Azerbaijan is actually around the Eur-A average and very much lower than the Eur-B+C average.

Mortality from cancer is also lower than both the Eur-B+C and the Eur-A averages. However, the low rates of mortality for infectious and parasitic diseases, and for respiratory diseases, are unexpected. The rates have decreased considerably since 1995.

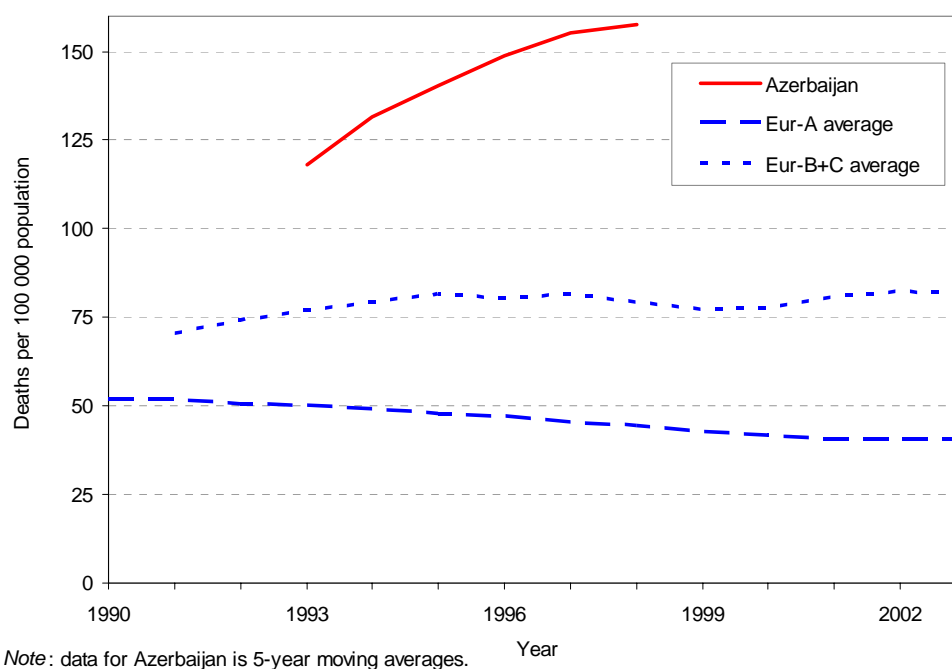
SDR for infectious and parasitic diseases, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year



Note: data for Azerbaijan is 5-year moving averages.

The most prominent cause of excess mortality in Azerbaijan is chronic liver disease and cirrhosis: the rates for the total population are 45% higher than the corresponding Eur-B+C average rates. The rates for middle-aged and older adults, however, are about twice as high as the corresponding Eur-B+C average rates. This would generally indicate that past and current alcohol consumption levels are probably high and are compounded by other risks, related to improper nutrition and sanitation, which can cause higher exposures to hepatitis viruses.

SDR for chronic liver disease and cirrhosis in people aged 60–74 years, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year

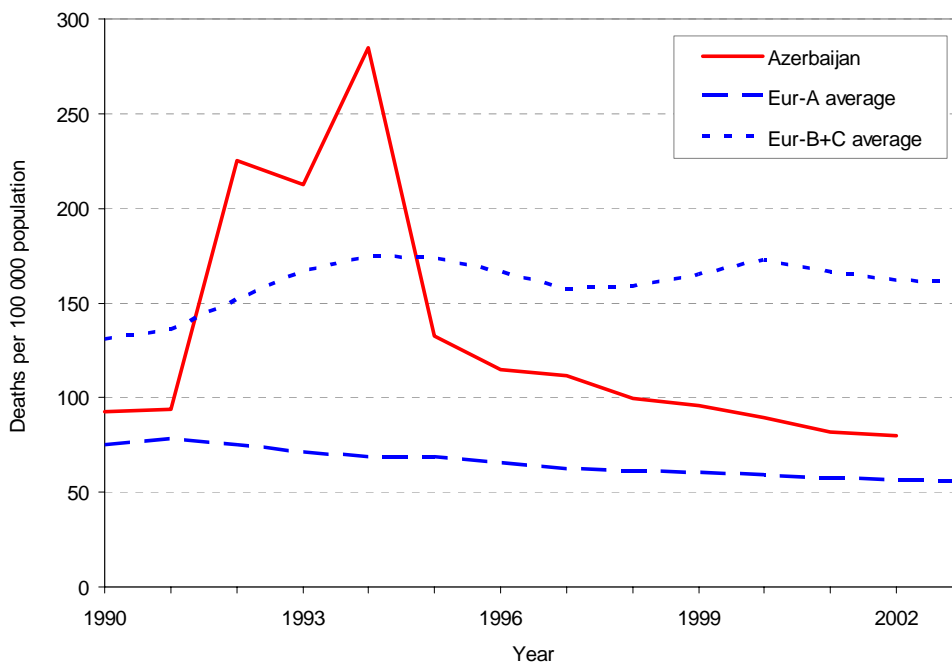


If alcohol consumption is high, there should be an investigation of why mortality from external causes is low, as these rates frequently correlate. Inaccurate coding of causes of death is unlikely to explain the apparent lack of association, but the phenomenon may be a useful entry point for further analysis.

In the youngest age group, 0–14 year olds (Annex. Mortality data), the mortality in Azerbaijan of 195 deaths per 100 000 population (2002) is about a third higher than the Eur-B+C-average of 152 deaths per 100 000 population and four times higher than the Eur-A-average of 49 deaths per 100 000 population. By 2002, it had improved 6.0%, in comparison with the 1995 rate, while the rate of improvement of the Eur-B+C average for the same period was 3.8%. The improvement is valid for most causes of death. It should be pointed out, however, that the reported deaths due to perinatal causes are only half as high as the Eur-B+C average. This is unusual for the southern CIS countries, in which these conditions remain a major problem. The rates in Azerbaijan are typical for the Eur-A group and may be subject to considerable underreporting.

In the age group of 15–29 year olds (Annex. Mortality data), the total mortality rate of 80 deaths per 100 000 population in Azerbaijan is half of the corresponding Eur-B+C average of 161 deaths per 100 000 population. The lower overall mortality is due mainly to very low rates from external causes. As already mentioned, this may be an important observation, as it might indicate a different pattern of mortality in younger adults, compared with several other CIS countries where high rates of unnatural deaths result from environments and behaviour conducive to violence.

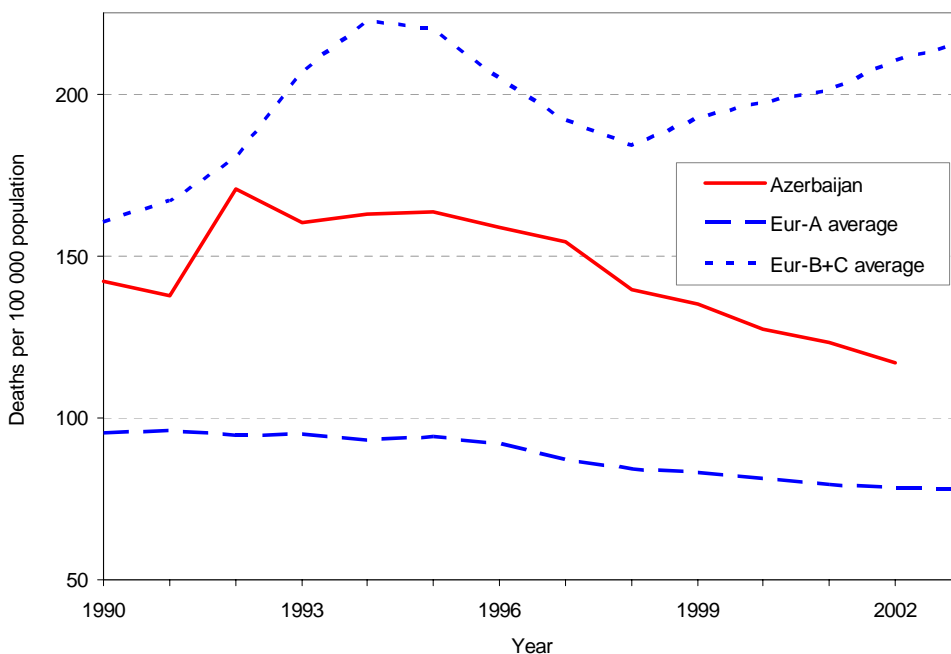
SDR for all causes in people aged 15–29 years, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year



It should be mentioned that mortality from infectious and respiratory diseases in the age group of 15–29-year-old Azerbaijanis is above the Eur-B+C average, but is decreasing, provided that the coding of deaths is sufficiently accurate. Overall mortality rates in the age group of 15–29-year-old Azerbaijanis have returned to (or are even below) the rates of 1990, which were below the corresponding Eur-B+C average rates.

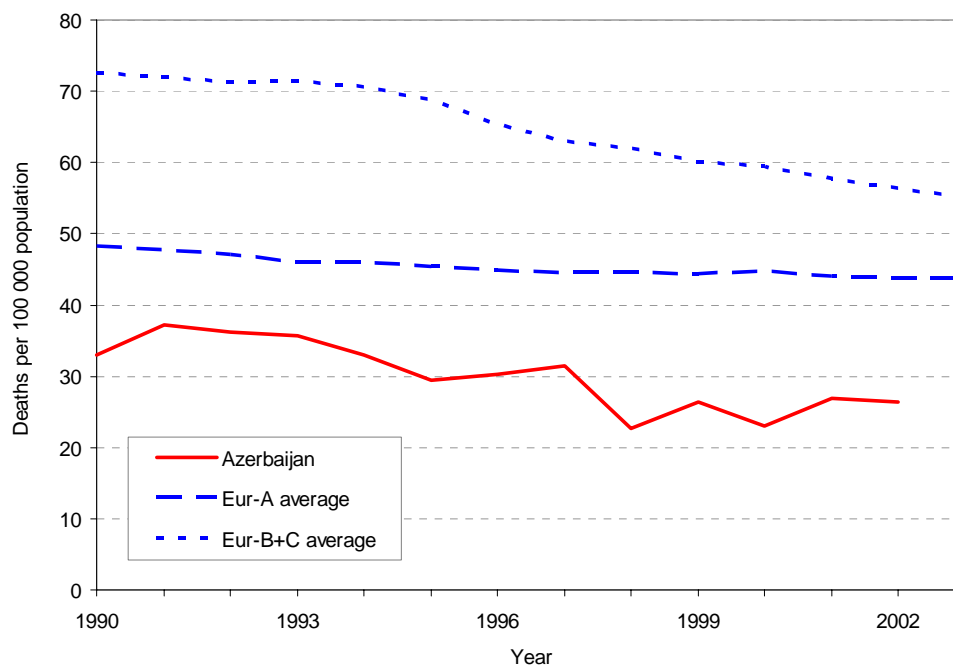
In the age group of 30–44 year olds (Annex. Mortality data), the situation is similar to that of Azerbaijan overall, in that the country performs considerably better than the Eur-B+C average.

SDR for all causes in females aged 30–44 years, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year



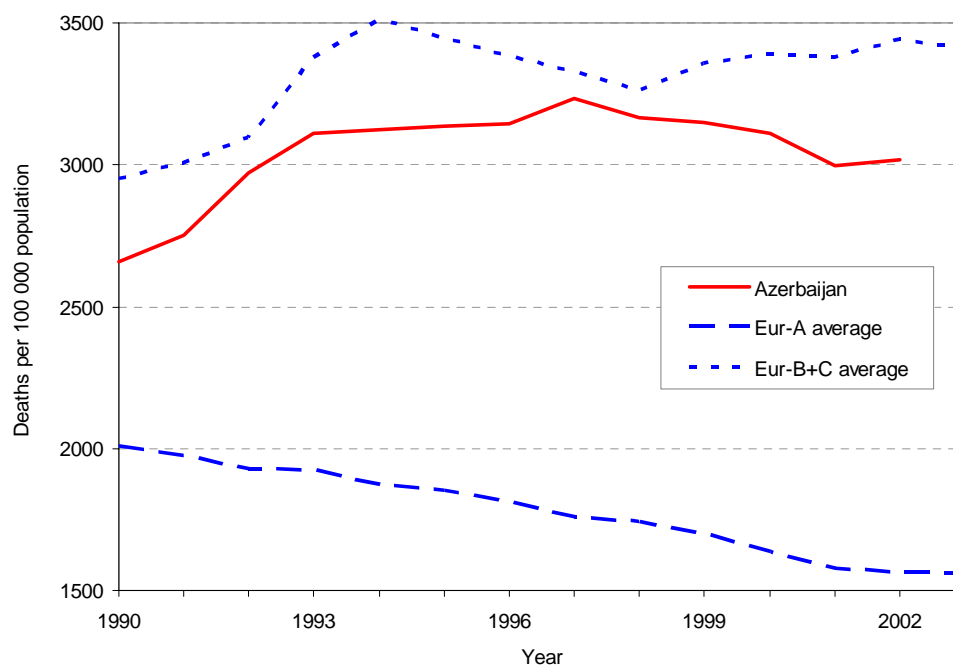
In the age group of 45–59 year olds (*Annex. Mortality data*), the situation is similar to the above age group in that mortality rates are comparatively lower than the Eur-B+C average for practically all causes of death. Mortality from lung cancer is surprisingly low, which might be due to under-diagnosis or underreporting.

SDR for lung cancer in people aged 45–59 years, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year



In the age group of 60–74 year olds, however, the mortality levels and structure become similar to those of the Eur-B+C group average.

SDR for all causes of death in people aged 60–74 years, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year

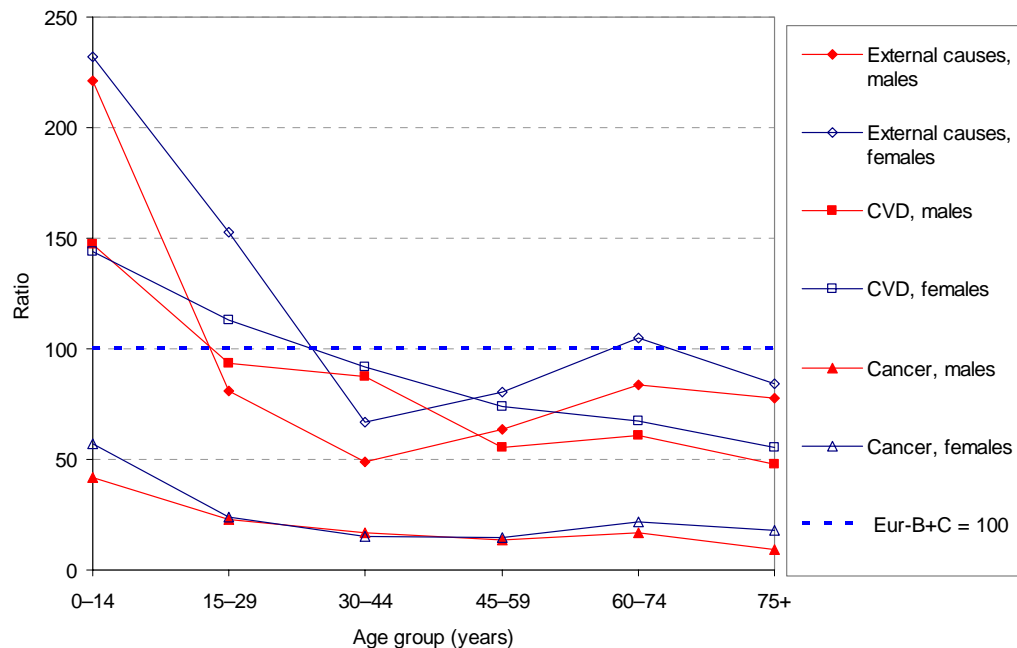


The situation and trends in the older age groups are difficult to judge because of large fluctuations and likely underreporting.

Main causes of death

As indicated above, with the exception of children and females aged 15–29 years, all other main causes of death in all groups by age and sex present lower rates than the respective Eur-B+C averages. Again, the observations upon the causes of mortality should be interpreted with some caution.

Main causes of mortality by sex and age group in Azerbaijan
in comparison with Eur-B+C (Eur-B+C = 100), 2003

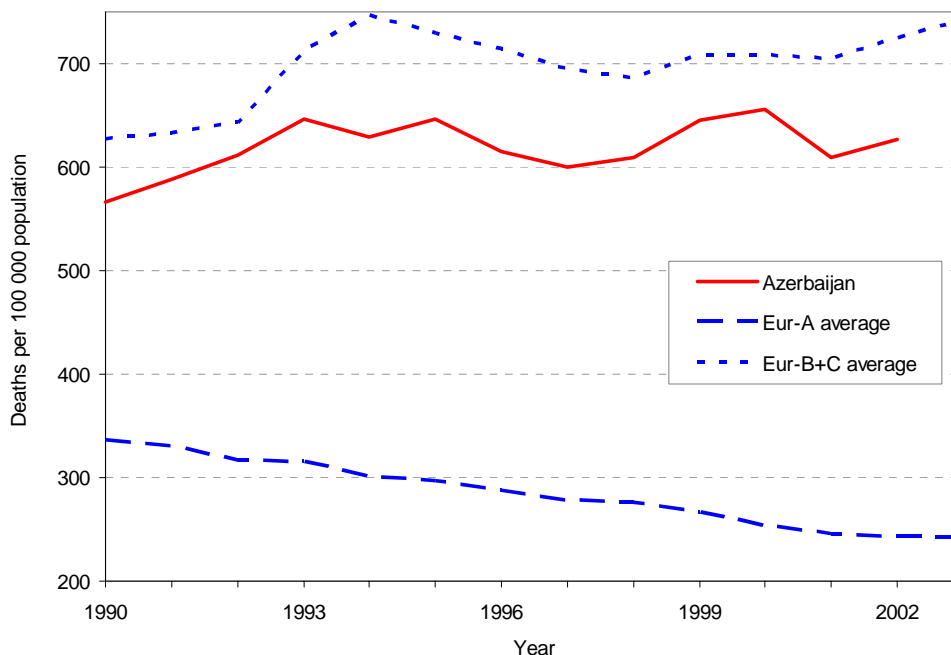


In 2002, noncommunicable diseases accounted for about 87% of all deaths in Azerbaijan; external causes for about 3%; communicable diseases for about 2%; and about 3% was due to ill-defined conditions (*Annex. Selected mortality*). In the Eur-B+C group, the average mortality rate for external causes is considerably larger (10.6%) than the rate in Azerbaijan, and the rate for noncommunicable diseases is smaller (79.6%) than the rate in Azerbaijan.

CVD

In 2002, CVD were the main cause of death in Azerbaijan, responsible for 63% of the overall mortality, compared with the Eur-B+C average of 57% for that year. A considerable part of the difference is probably due to inaccurate coding, in that certain conditions are inaccurately classified as CVD. About two thirds of all mortality from CVD is due to ischaemic heart disease and a fifth is attributed to cerebrovascular diseases. Overall, the situation is similar to that in other CIS countries and to that reflected in the Eur-B+C average. This means that CVD are by far the biggest public health problem in terms of mortality.

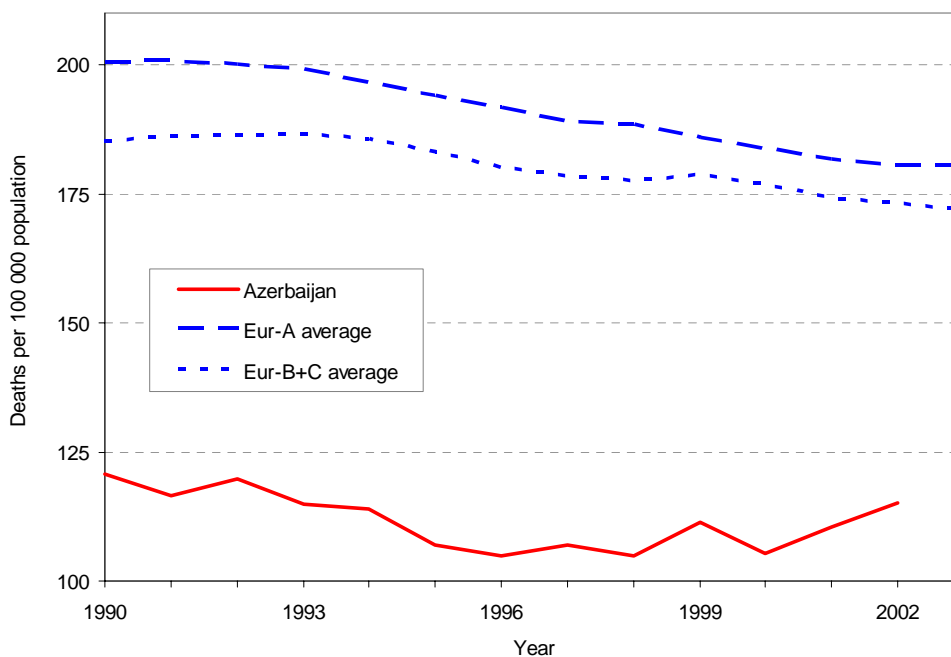
SDR for CVD in people of all ages, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year



Cancer

Mortality from cancer is distributed relatively equally across the Region, but the rates in Azerbaijan are considerably lower than the Eur-B+C and Eur-A average rates. The interpretation of the observation is not straightforward, as the completeness and quality of the registration and coding of cancer deaths limit the possibilities for detailed analysis, which is a common problem in the southern CIS countries.

SDR for cancer in people of all ages, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year

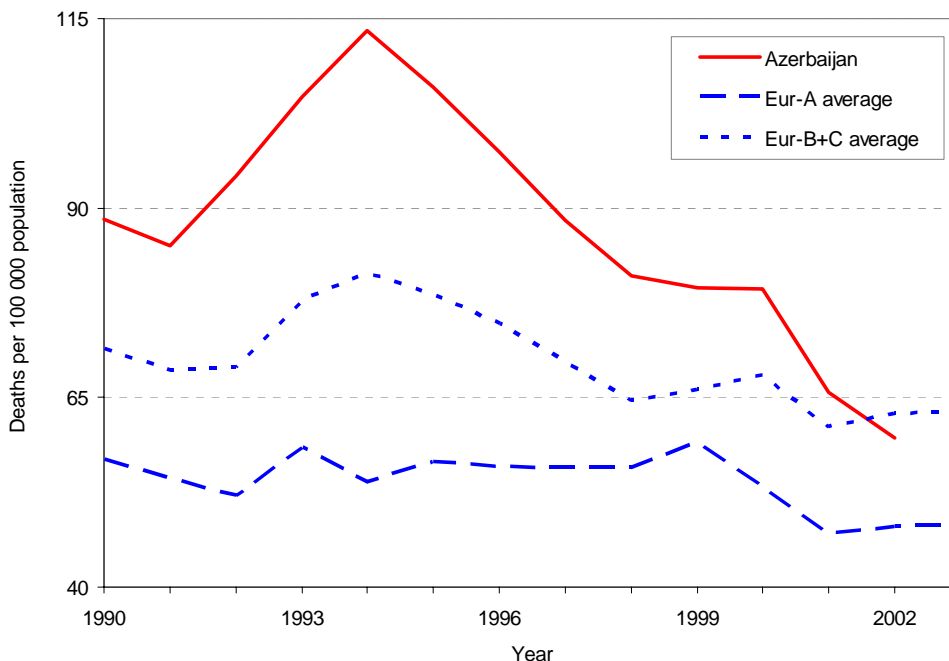


Respiratory diseases

Respiratory diseases, in 2002, accounted for 6% of total mortality in Azerbaijan – this after a steep decline in the mortality rate, to reach the Eur-B+C average rate. This is remarkable and may be due to

improved medical treatment. However, interpretation of this decline is difficult due to the above-mentioned data problems.

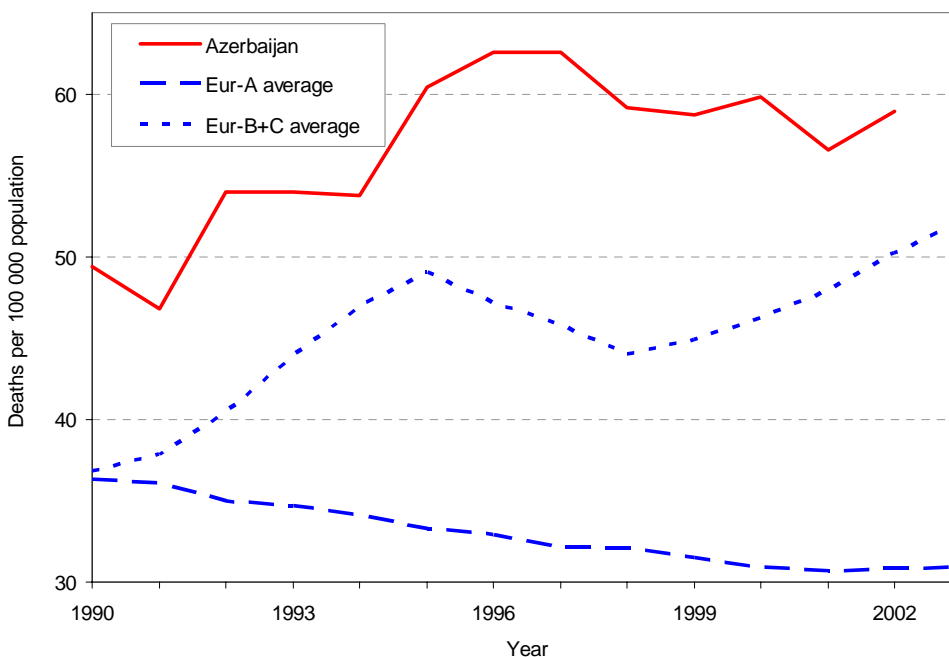
SDR for respiratory diseases in people of all ages, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year



Digestive diseases

Mortality from digestive diseases has dropped steadily in Eur-A over the last 20 years, but in Eur-B+C it had increased considerably since 1990, which is also the case in Azerbaijan. By 2002, the mortality rate was about 13% above the Eur-B+C-average rate. As already mentioned, a considerable part of the problem is the excess mortality from chronic liver disease and cirrhosis. While a history of high morbidity from hepatitis may play a role, high alcohol consumption levels in the population likely compound it.

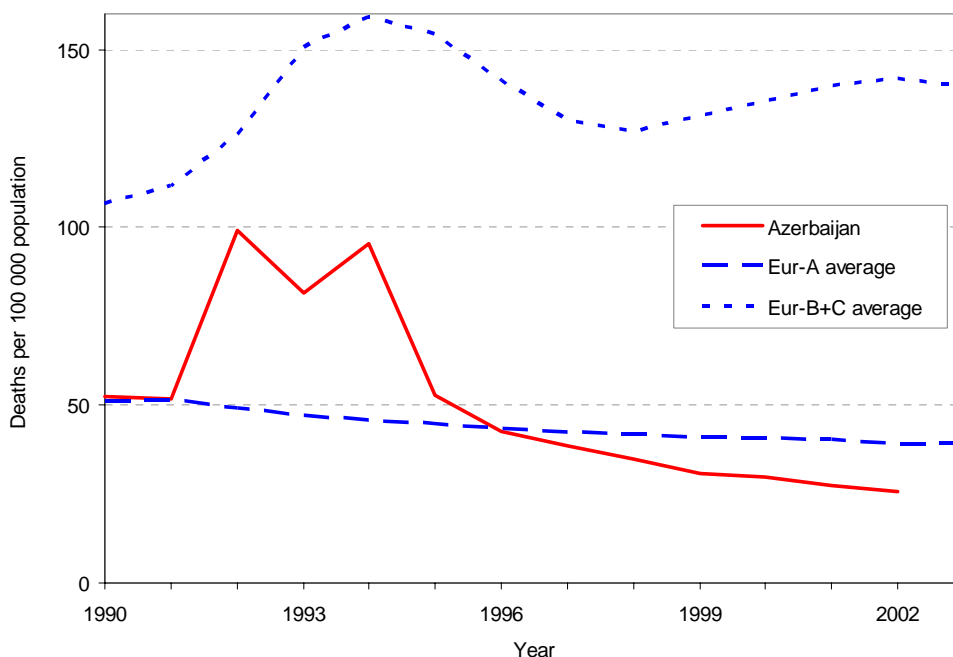
SDR for diseases of the digestive system in people of all ages, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year



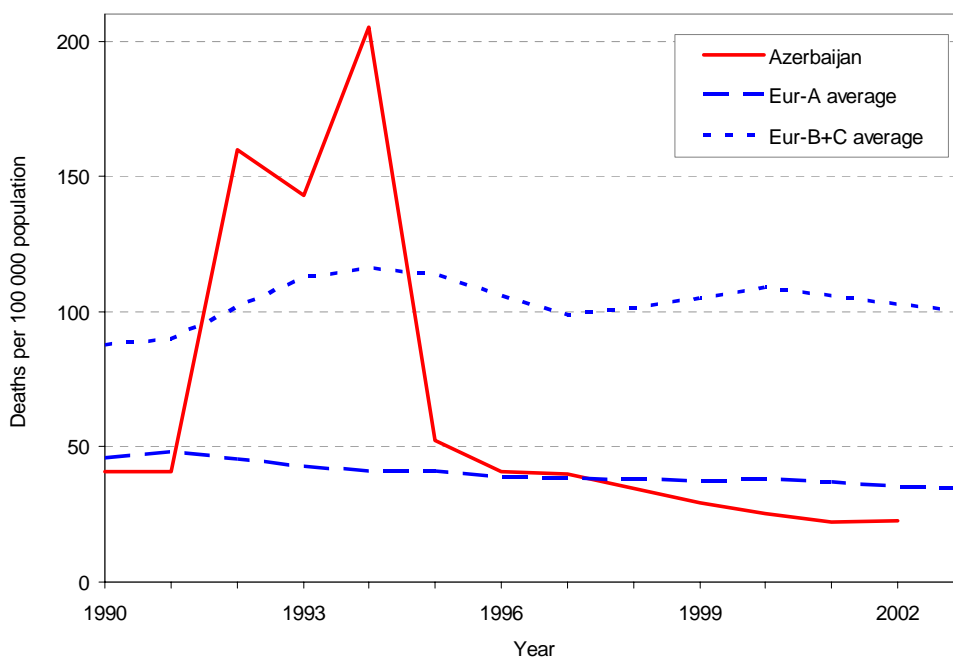
External causes

External causes of injury and poisoning include unintentional injuries (such as those from transport, poisoning, falls, fires and drowning) and intentional injuries (such as those that are self-inflicted and those due to violence and war). Overall, external causes were responsible in 2002 for 26 deaths per 100 000 population in Azerbaijan, compared with the Eur-B+C average for that year of 140 deaths per 100 000 population and the Eur-A average of 40 deaths per 100 000 population.

SDR for external causes of injury and poisoning in people of all ages, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year



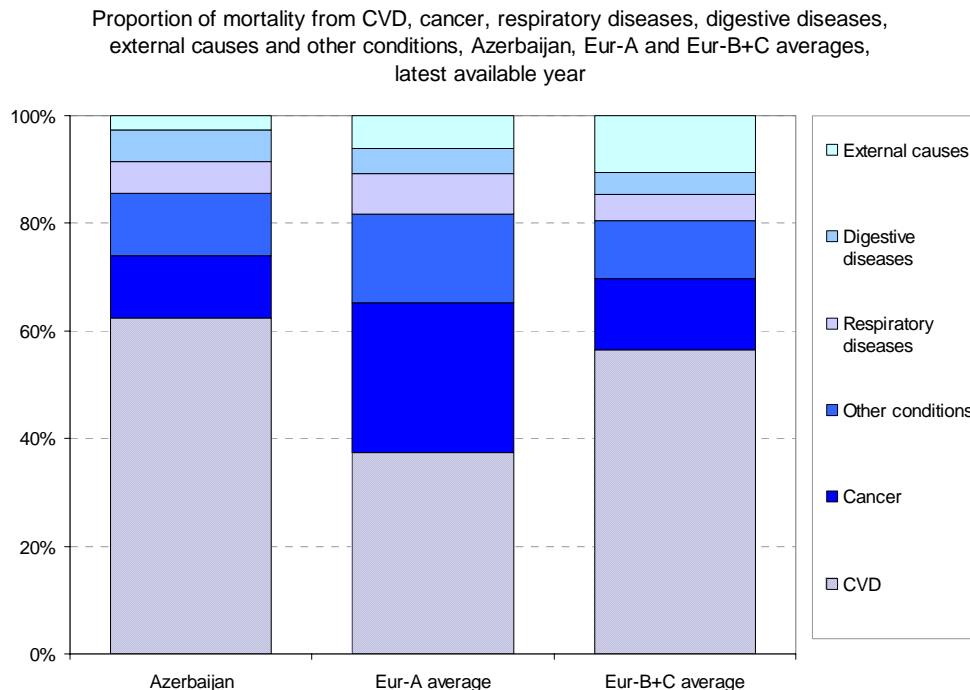
SDR for external causes of injury and poisoning in people aged 15–29 years, Azerbaijan, Eur-A and Eur-B+C averages, 1990 to latest available year



The low mortality rate for external causes is characteristic of the overall pattern of mortality among middle-aged people in Azerbaijan. The situation is similar in other countries in the southern CIS, in contrast to the Eur-B+C average. The difference in mortality from external causes of injury between the

Eur-B+C average rate and the rate for Azerbaijan is largely in favour of Azerbaijan, and understanding this difference is important for understanding Azerbaijan's health status and prospects.

Proportional mortality is a rough (but robust) measure that can help consolidate the analysis of the recent situation in Azerbaijan, because of the often-uncertain reliability of the age- and cause-specific mortality rates in the country. The following figure shows both the differences and the similarities in the overall pattern of mortality in Azerbaijan, compared with the Eur-A and Eur-B+C averages.



The main difference is the lower proportion of deaths from external causes (2.6%), as compared with the Eur-A average (6.0%) and Eur-B+C-average (10.6%). The observation is probably real and is therefore very important.

The mortality rate for CVD is considerably higher in Azerbaijan (62.0%) than the average rates for Eur-A (37.4%) and Eur-B+C (56.5%). This may be due, in part, to imperfect coding practices that label avoidable mortality due to other causes as CVD.

On the other hand, it should be recognized that the mortality structure in Azerbaijan is quite similar to the average mortality structures in Eur-A and Eur-B+C. This fact should not be overlooked in reading this country *Highlight on health* – which focuses primarily on deviations from the means – as it helps to balance the final analysis. The message is that there is no specific disease pattern for the rich countries that sets them apart from those countries most in need of international assistance. It is not the selection of the diseases per se but the frequency of occurrence of these diseases that varies within and between countries (Marmot et al., 2005).

Moreover, since the main causes of these variations are social, the challenge is to document the specific pathways between the causes and the alternative outcomes in a particular population, so that policy can address the chain of circumstances and events more efficiently.

In conclusion, the main reason for the relatively lower overall health status of the population in Azerbaijan is children's health, as generally expected. The positive aspects of the country's health status are moderate mortality in adults and, in particular, low mortality from external causes. Infectious and parasitic diseases, and mortality resulting from poor environmental conditions, should not be underestimated, although they may not be adequately reflected in the statistics on mortality. This underscores the importance of continuously monitoring the country's health status with the available

(even if not perfect) mortality data and, particularly, with sample surveys of the population, as this is the way to best link regular health statistics with the specific patterns and causes of ill health.

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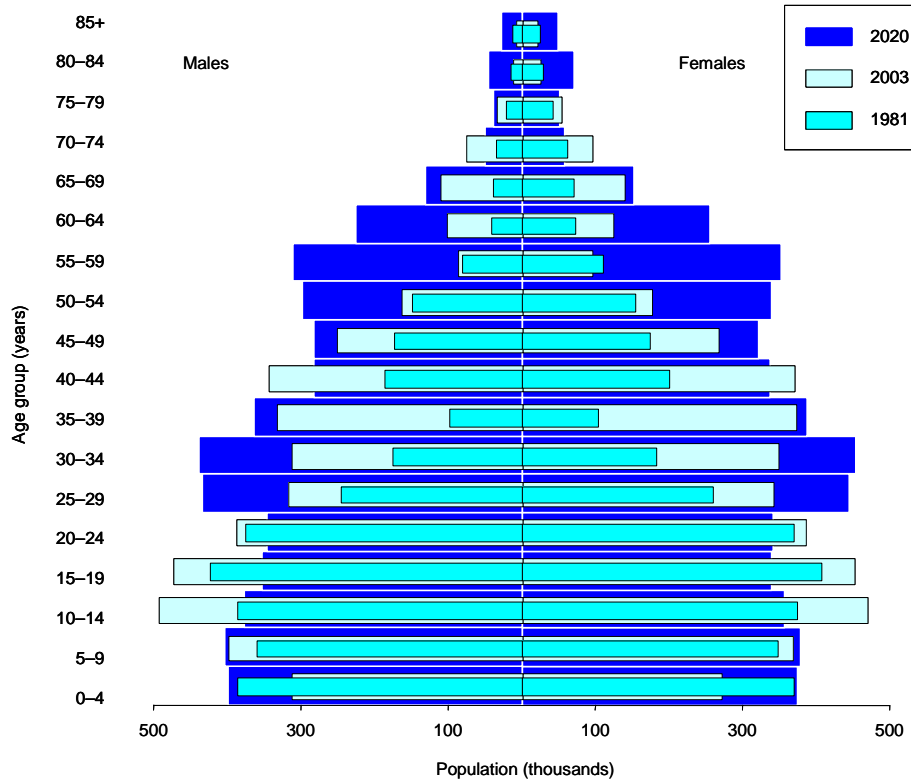
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Annexes

Annex. Age Pyramid

AGE PYRAMID FOR AZERBAIJAN, 1970, 2001 AND 2020 (PROJECTED)



Sources: WHO Regional Office for Europe (2005) and United Nations (2005).

Annex. Selected mortality

SELECTED MORTALITY IN AZERBAIJAN COMPARED WITH EUR-A OR EUR-B+C AVERAGE

Selected mortality in Azerbaijan compared with Eur-A and Eur-B+C averages

Condition	SDR per 100 000		Excess mortality in Azerbaijan (%)	Total deaths in Azerbaijan (%)	Total deaths in Eur-B+C (%)	Eur-A average	Excess Azerbaijan to Eur-A (%)	Total deaths in Eur-A (%)
	Azerbaijan (2002)	Eur- B+C average (2003)						
Selected non-communicable conditions	872.9	1044.9	-16.5	87.0	79.6	533.8	63.5	82.4
<i>Cardiovascular diseases</i>	626.5	741.8	-15.5	62.5	56.5	243.4	157.4	37.6
Ischaemic heart disease	423.7	362.7	16.8	42.2	27.6	95.9	341.8	14.8
Cerebrovascular diseases	123.0	221.7	-44.5	12.3	16.9	61.1	101.3	9.4
Diseases of pulmonary circulation and other heart disease	34.0	68.9	-50.7	3.4	5.3	56.6	-39.9	8.7
<i>Malignant neoplasms</i>	115.1	172.0	-33.1	11.5	13.1	181.5	-36.6	28.0
Trachea/bronchus/lung cancer	17.1	33.9	-49.6	1.7	2.6	37.1	-53.9	5.7
Female breast cancer	13.8	22.1	-37.6	1.4	1.7	27.0	-48.9	4.2
Colon/rectal/anal cancer	6.4	19.0	-66.3	0.6	1.4	20.7	-69.1	3.2
Prostate	11.2	14.3	-21.7	1.1	1.1	25.1	-55.4	3.9
<i>Respiratory diseases</i>	59.7	63.1	-5.4	6.0	4.8	47.8	24.9	7.4
Chronic lower respiratory diseases	20.6	31.2	-34.0	2.1	2.4	20.2	2.0	3.1
Pneumonia	21.8	23.6	-7.6	2.2	1.8	16.2	34.6	2.5
<i>Digestive diseases</i>	58.9	52.3	12.6	5.9	4.0	30.8	91.2	4.8
Chronic liver disease and cirrhosis	46.4	32.0	45.0	4.6	2.4	12.6	268.3	1.9
<i>Neuropsychiatric disorders</i>	12.6	15.7	-19.7	1.3	1.2	30.3	-58.4	4.7
Communicable conditions	20.6	20.8	-1.0	2.1	1.6	8.4	145.2	1.3
AIDS/HIV	0.0	0.8	-100.0	0.0	0.1	1.1	-100.0	0.2
External causes	25.6	139.6	-81.7	2.6	10.6	40.3	-36.5	6.2
<i>Unintentional</i>	21.3	102.2	-79.2	2.1	7.8	28.7	-25.8	4.4
Road traffic injuries	5.7	14.7	-61.2	0.6	1.1	9.9	-42.4	1.5
Falls	0.5	7.5	-93.3	0.0	0.6	6.1	-91.8	0.9
<i>Intentional</i>	4.3	37.4	-88.5	0.4	2.9	11.6	-62.9	1.8
Self-inflicted (suicide)	1.4	23.2	-94.0	0.1	1.8	10.6	-86.8	1.6
Violence (homicide)	2.9	14.2	-79.6	0.3	1.1	1.0	190.0	0.2
Ill-defined conditions	30.8	64.0	-51.9	3.1	4.9	20.9	47.4	3.2
All causes	1002.9	1312.2	-23.6	100.0	100.0	647.8	54.8	100.0

Annex. Mortality data

Mortality data

Table 1. Selected mortality for the group 0–14 years by sex in Azerbaijan and Eur-B+C:
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Azerbaijan (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	194.5	-5.7	49.4	-2.4	151.7	-3.8
	M	202.4	-6.0	55.3	-2.5	170.5	-3.9
	F	185.6	-5.3	43.3	-2.4	131.9	-3.8
Infectious and parasitic diseases	M	20.0	-7.9	1.4	-1.1	10.9	-7.0
	F	18.1	-7.4	1.1	-3.0	9.5	-6.6
Intestinal infectious diseases	M	12.3	-8.7	0.2	-0.7	5.1	-8.2
	F	10.8	-8.5	0.1	-7.3	4.7	-7.9
Malignant neoplasms	M	7.5	9.1	3.3	-1.8	5.1	-1.9
	F	6.1	3.2	2.6	-1.8	4.2	-1.9
Cardiovascular diseases	M	7.3	10.4	1.4	-3.1	3.3	1.1
	F	6.0	4.0	1.3	-2.5	2.6	0.1
Respiratory diseases	M	89.9	-6.6	1.4	-4.3	35.9	-5.0
	F	86.9	-6.2	1.0	-4.2	30.7	-5.0
Pneumonia	M	63.0	-6.5	0.5	-6.0	20.9	-4.9
	F	65.0	-5.3	0.4	-5.1	17.9	-4.7
Certain conditions originating in perinatal period	M	288.6	-4.8	255.3	-2.1	607.6	-2.7
	F	188.4	-5.2	202.3	-1.6	427.5	-2.7
Congenital malformations and chromosomal abnormalities	M	11.0	-1.7	11.6	-2.9	24.2	-2.8
	F	7.3	-7.1	10.0	-3.3	21.0	-2.6
Ill-defined causes	M	2.7	-10.1	5.0	-3.9	5.6	-0.6
	F	3.3	-9.1	3.4	-4.2	4.6	-1.0
External causes of injury and poisoning	M	12.1	-8.5	7.0	-4.0	29.0	-3.4
	F	10.3	-6.7	4.6	-3.2	18.1	-3.1
Motor vehicle traffic injuries	M	1.9	22.8	2.5	-4.5	4.7	-2.6
	F	1.0	21.8	1.7	-4.8	3.0	-1.6

Mortality data contd

Table 2. Selected mortality for the group 15–29 years by sex in Azerbaijan and Eur-B+C:
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Azerbaijan (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	79.9	-5.7	56.0	-2.3	161.0	-0.9
	M	105.4	-5.7	82.0	-2.3	241.7	-1.0
	F	55.4	-5.3	29.3	-2.2	79.0	-0.6
Infectious and parasitic diseases	M	17.8	-2.3	1.2	1.5	12.3	3.0
	F	6.0	-6.7	0.8	1.9	5.1	2.5
Malignant neoplasms	M	8.2	-2.7	6.2	-1.0	8.8	-1.9
	F	8.7	-3.2	4.7	-1.4	7.7	-1.9
Cardiovascular diseases	M	14.2	-3.1	4.1	-2.4	17.6	0.0
	F	11.1	-4.3	2.3	-2	7.3	-0.9
Respiratory diseases	M	6.3	-5.5	1.4	-3.6	6.9	0.2
	F	2.8	-9.7	0.9	-2.7	3.8	-1.1
Digestive diseases	M	3.8	-4.5	0.9	-3.5	8.0	3.0
	F	3.1	-4.5	0.5	-3.8	3.7	3.1
Ill-defined causes	M	4.8	0.5	4.0	-3.1	11.6	7.1
	F	1.5	-2.1	1.4	-1.3	3.3	5.8
External causes	M	36.9	-8.1	58.3	-1.4	162.4	-1.6
	F	8.9	-6.7	14.4	-1.6	36.9	-0.2
Motor vehicle traffic injuries	M	6.5	10.6	28.5	-1.3	27.8	-1.5
	F	1.1	17.8	7.3	-1.4	8.0	0.3
Accidental drowning	M	5.3	-0.1	1.3	-2.2	10.8	-3.9
	F	1.7	23.1	0.2	-2.1	1.9	-2.2
Accidental poisoning	M	1.6	-9.4	2.8	0.0	19.1	3.3
	F	1.0	-10.8	0.7	0.8	4.4	2.5
Suicide	M	1.3	1.1	12.7	-1.8	36.8	0.0
	F	0.3	7.0	3.1	-2.2	5.8	-1.3

Mortality data contdTable 3. Selected mortality for the group 30–44 years by sex in Azerbaijan and Eur-B+C:
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Azerbaijan (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	185.2	-4.8	120.3	-2.5	453.8	-0.7
	M	259.7	-5.1	161.6	-2.6	700.0	-0.8
	F	117.1	-4.1	78.5	-2.1	215.6	-0.2
<i>Malignant neoplasms</i>	M	35.2	-0.9	27.6	-2.3	40.2	-2.8
	F	40.1	-0.6	31.3	-2.0	43.8	-1.4
Trachea/bronchus/lung cancer	M	5.3	-3.6	5.0	-3.4	7.3	-4.2
	F	2.1	1.0	2.8	-0.6	2.2	-1.0
Female breast cancer	F	11.1	-1.1	10.0	-2.6	10.0	-2.3
<i>Cardiovascular diseases</i>	M	77.3	-4.7	26.1	-2.5	158.6	-0.4
	F	30.2	-3.6	10.4	-2.1	45.3	0.0
Ischaemic heart disease	M	51.2	-4.8	11.8	-3.1	73.7	-2.2
	F	12.8	-3.5	2.4	-2.7	14.4	-1.3
Cerebrovascular diseases	M	10.7	-5.3	4.4	-3.2	24.6	-0.4
	F	7.3	-4.2	3.6	-2.5	10.6	-1.3
<i>Respiratory diseases</i>	M	7.8	-7.9	3.9	-3.5	34.3	0.9
	F	4.1	-8.7	2.2	-2.0	9.8	0.8
<i>Digestive diseases</i>	M	20.2	-6.4	12.6	-2.4	50.2	1.4
	F	8.4	-5.1	5.4	-1.7	19.4	4.1
<i>External causes</i>	M	50.1	-7.3	58.8	-1.2	299.5	-1.9
	F	9.1	-8.8	15.1	-1.8	58.9	-1.0
Motor vehicle traffic injuries	M	13.5	22.4	16.0	-0.5	31.4	-1.7
	F	2.4	4.7	3.9	-2.0	7.1	-0.5
Suicide	M	1.8	-2.6	21.2	-1.5	54.9	-2.4
	F	0.8	5.9	5.8	-2.2	7.9	-2.5

Mortality data contdTable 4. Selected mortality for the group 45–59 years by sex in Azerbaijan and Eur-B+C:
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Azerbaijan (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	713.5	-3.8	435.6	-1.3	1294.9	-0.6
	M	968.1	-4.4	580.1	-1.4	1981.7	-0.6
	F	480.6	-2.7	293.3	-1.0	698.9	-0.5
<i>Malignant neoplasms</i>	M	179.1	-2.3	218.2	-1.2	323.2	-1.9
	F	137.6	1.6	155.0	-1.0	186.1	-0.5
Trachea/bronchus/lung cancer	M	45.1	-2.9	65.9	-1.5	101.4	-2.9
	F	9.3	11.3	21.8	3.4	15.4	1.0
Female breast cancer	F	32.3	2.8	44.0	-2.2	45.3	0.1
<i>Cardiovascular diseases</i>	M	504.8	-4.0	156.4	-2.6	793.1	-0.1
	F	218.8	-3.4	50.9	-2.5	271.7	-0.6
Ischaemic heart disease	M	359.6	-4.1	86.2	-3.3	435.3	-0.7
	F	118.4	-3.7	17.8	-3.4	111.1	-0.6
Cerebrovascular diseases	M	79.5	-4.4	23.7	-2.6	168.6	-0.9
	F	64.3	-3.3	14.5	-2.1	88.4	-1.4
<i>Respiratory diseases</i>	M	30.5	-9.0	20.3	-1.7	108.7	-1.4
	F	14.0	-7.1	10.2	-1.3	24.5	-0.7
<i>Digestive diseases</i>	M	74.5	-5.7	49.6	-0.8	129.7	0.7
	F	34.9	-3.5	20.3	-0.7	57.3	1.9
<i>External causes</i>	M	54.7	-7.1	62.8	-1.0	409.2	-0.9
	F	13.1	-8.5	20.9	-0.9	89.1	-1.1
Motor vehicle traffic injuries	M	13.7	6.1	13.0	-1.3	28.5	-1.8
	F	3.3	25.8	4.1	-2.1	7.5	-1.4
Suicide	M	4.1	23.5	23.1	-1.1	68.1	-2.4
	F	0.2		8.5	-1.2	10.2	-3.4

Mortality data contd

Table 5. Selected mortality for the group 60–74 years by sex in Azerbaijan and Eur-B+C:
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Azerbaijan (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	3016.1	-0.5	1570.9	-1.9	3411.7	-0.1
	M	3798.7	-1.3	2156.9	-2.1	4996.4	0.1
	F	2383.0	0.1	1069.2	-1.9	2339.0	-0.6
Malignant neoplasms	M	608.7	1.1	851.3	-1.4	1002.5	-0.8
	F	294.8	2.7	439.8	-1.1	438.9	-0.7
Trachea/bronchus/lung cancer	M	127.2	1.2	261.8	-1.9	321.7	-1.5
	F	23.8	6.5	59.0	0.2	37.1	-1.4
Female breast cancer	F	31.4	2.2	79.7	-1.6	68.7	1.3
Cardiovascular diseases	M	2424.1	-1.1	744.9	-3.6	2903.0	0.6
	F	1585.6	-0.2	335.7	-3.9	1507.8	-0.3
Ischaemic heart disease	M	1711.0	-1.2	381.3	-4.2	1582.2	1.2
	F	997.7	-0.3	133.5	-4.6	731.4	0.5
Cerebrovascular diseases	M	454.0	-1.9	143.3	-3.7	833.7	0.2
	F	377.6	-0.8	86.7	-4.1	528.9	-0.8
Respiratory diseases	M	179.2	-6.7	144.0	-3.5	303.0	-2.4
	F	81.5	-6.2	62.5	-2.4	68.6	-3.6
Digestive diseases	M	240.8	0.4	111.6	-1.6	193.0	0.1
	F	182.4	3.1	54.1	-1.7	94.2	0.2
External causes	M	53.9	-6.1	79.3	-1.4	320.0	1.0
	F	19.1	-5.9	32.1	-2.1	88.7	-0.5
Motor vehicle traffic injuries	M	13.0	11.4	14.8	-3.0	24.3	-1.5
	F	4.1	8.6	5.9	-3.4	9.5	-1.0
Suicide	M	6.4	16.1	24.5	-1.6	60.5	-0.8
	F	1.6		8.7	-2.6	12.7	-3.1

Mortality data contd

Table 6. Selected mortality for the group 75+ years by sex in Azerbaijan and Eur-B+C:
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Azerbaijan (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	9994.4	1.0	8059.6	-1.0	12338.8	0.0
	M	10670.1	-1.0	9832.0	-1.1	14838.0	0.1
	F	9619.1	1.9	7112.5	-0.9	11421.7	0.0
Malignant neoplasms	M	708.2	0.6	2231.1	-0.4	1489.3	1.2
	F	398.8	4.9	1136.2	-0.4	721.7	0.8
Trachea/bronchus/lung cancer	M	112.7	7.7	457.1	-0.7	323.5	1.0
	F	33.9	19.8	102.7	1.5	55.6	0.5
Female breast cancer	F	28.0	8.3	159.6	-0.4	92.0	3.1
Cardiovascular diseases	M	7949.6	-0.8	4356.2	-2.1	10221.2	0.4
	F	7428.4	1.8	3577.9	-1.9	8805.6	0.4
Ischaemic heart disease	M	5635.4	-0.5	1708.0	-2.2	4925.6	1.4
	F	5082.7	1.9	1150.0	-2.2	4028.6	1.2
Cerebrovascular diseases	M	1436.6	-2.0	1119.8	-2.5	3004.4	0.7
	F	1426.9	0.2	1026.9	-2.4	2967.6	0.5
Respiratory diseases	M	509.3	-7.0	1156.5	-2.4	824.1	-2.1
	F	442.4	-3.5	591.9	-2.1	302.3	-3.2
Digestive diseases	M	477.9	2.8	340.3	-1.1	270.4	0.3
	F	465.1	4.3	279.8	-0.4	175.0	1.1
External causes	M	56.9	-7.0	275.0	-0.6	604.2	0.1
	F	31.2	-5.2	187.8	-1.2	172.4	-1.2
Motor vehicle traffic injuries	M	14.1	-2.3	28.1	-2.2	34.6	-3.1
	F	6.0	4.5	10.0	-3.1	14.7	-1.7
Suicide	M	3.4	-7.0	49.5	-1.6	86.6	-1.1
	F	1.1	4.1	11.8	-3.2	22.4	-1.9

Technical notes

Calculation of averages

Averages for the reference group, when based on data in the European health for all database of the WHO Regional Office for Europe, are weighted by population. Some countries with insufficient data may be excluded from the calculation of averages. Otherwise, for data from other sources, simple averages have been calculated where required.

To smooth out fluctuations in annual rates caused by small numbers, three-year averages have been used, as appropriate. For example, maternal mortality, usually a small number, has three-year moving averages calculated for all countries. When extreme fluctuations are known to be due to population anomalies, data have been deleted, as appropriate.

Data sources

To make the comparisons as valid as possible, data for each indicator have, as a rule, been taken from one source to ensure that they have been harmonized in a reasonably consistent way. Unless otherwise noted, the source of data for figures and tables in this report is the January 2005 version of the European health for all database of the WHO Regional Office for Europe. The health for all database acknowledges the various primary sources of the data.

In cases where current census data for national population are unavailable, coupled with ongoing migrations of people in and out of countries, UN estimates or provisional figures supplied by the country are used to approximate national population. Such population figures create uncertainty in standardized death rates.

Disease coding

Case ascertainment, recording and classification practices (using the ninth and tenth revisions of the International Statistical Classification of Diseases and Related Health Problems: ICD-9 and ICD-10, respectively), along with culture and language, can influence data and therefore comparability across countries.

Healthy life expectancy (HALE) and disability-adjusted-life-years (DALYs)

HALE and DALYs are summary measures of population health that combine information on mortality and non-fatal health outcomes to represent population health in a single number. They complement mortality indicators by estimating the relative contributions of different causes to overall loss of health in populations.

DALYs are based on cause-of-death information for each WHO region and on regional assessments of the epidemiology of major disabling conditions. The regional estimates have been disaggregated to Member State level for the highlights reports.

National estimates of HALE are based on the life tables for each Member State, population representative sample surveys assessing physical and cognitive disability and general health status, and on detailed information on the epidemiology of major disabling conditions in each country.

More explanation is provided in the statistical annex and explanatory notes of *The world health report 2003*¹.

Limitations of national-level data

National-level averages, particularly when they indicate relatively good positions or trends in health status, as is the case in most developed countries, hide pockets of problems. Unless the health status of a small population is so dramatically different from the norm that it influences a national indicator, health risks and poorer health outcomes for small groups will only become evident through subnational data.

¹ WHO (2003). *The world health report 2003 – Shaping the future*. Geneva, World Health Organization (<http://www.who.int/whr/2003/en>, accessed 10 June 2005).

Reference groups for comparison

When possible, international comparisons are used as one means of assessing a country's comparative strengths and weaknesses and to provide a summary assessment of what has been achieved so far and what could be improved in the future. Differences between countries and average values allow the formulation of hypotheses of causation or imply links or remedies that encourage further investigation.

The country groups¹ used for comparison are called reference groups and comprise:

- countries with similar health and socioeconomic trends or development; and/or
- geopolitical groups.

The 27 countries with very low child mortality and very low adult mortality are designated Eur-A by WHO. Eur-A comprises Andorra, Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, the Netherlands, Norway, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. However, data for most indicators are unavailable for two of the 27 countries: Andorra and Monaco. Therefore, unless otherwise indicated, Eur-A and averages for Eur-A refer to the 25 countries for which data are available.

The 25 countries with low child mortality and low or high adult mortality are designated Eur-B+C by WHO. Eur-B+C comprises Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Poland, Republic of Moldova, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, and Uzbekistan. Unless otherwise indicated, Eur-B+C and averages for Eur-B+C refer to these countries.

Comparisons should preferably refer to the same point in time, but the countries' latest available data are not all for the same year. This should be kept in mind as a country's position may change when more up-to-date data become available.

Graphs have usually been used to show time trends from 1980 onwards. These graphs present the trends for all the reference countries as appropriate. Only the country in focus and the group average are highlighted and identified in the legend. This enables the country's trends to be followed in relation to those of all the reference countries, and performance in relation to observable clusters and/or the main trend or average to be recognized more easily.

¹ WHO (2004). *The world health report 2004 – Changing history*. Geneva, World Health Organization (<http://www.who.int/whr/2004/en>, accessed 26 August 2004).

Glossary

Causes of death

	ICD-10 code
Cerebrovascular diseases	I60–I69
Chronic liver disease and cirrhosis	K70, K73, K74, K76
Chronic obstructive pulmonary disease	J40–J47
Colon/rectal/anal cancer	C18–C21
Diseases of pulmonary circulation and other heart disease	I26–I51
Falls	W00–W19
Female breast cancer	C50
Ischaemic heart disease	I20–I25
Pneumonia	J12–J18
Prostate cancer	C61
Neuropsychiatric disorders	F00–99, G00–99, H00–95
Road traffic injuries	V02–V04, V09, V12–V14, V19–V79, V82–V87, V89
Self-inflicted (suicide)	X60–X84
Trachea/bronchus/lung cancer	C33–C34
Violence	X85–Y09

Technical terminology

Disability-adjusted life-year (DALY)	The DALY combines in one measure the time lived with disability and the time lost owing to premature mortality. One DALY can be thought of as one lost year of healthy life.
GINI index	The GINI index measures inequality over the entire distribution of income or consumption. A value of 0 represents perfect equality; a value of 100, perfect inequality. Low levels in the WHO European Region range from 23 to 25; high levels range from 35 to 36 ¹ .
Healthy life expectancy (HALE)	HALE summarizes total life expectancy into equivalent years of full health by taking account of years lived in less than full health due to diseases and injuries.
Income poverty line (50% of median income)	The percentage of the population living below a specified poverty line: in this case, with less than 50% of median income.
Life expectancy at birth	The average number of years a newborn infant would live if prevailing patterns of mortality at the time of birth were to continue throughout the child's life.
Natural population growth	The birth rate less the death rate.
Neuropsychiatric conditions	Mental, neurological and substance-use disorders.
Population growth	(The birth rate less the death rate) + (immigration less emigration).
Standardized death rate (SDR)	The age-standardized death rate calculated using the direct method: that is, it represents what the crude rate would have been if the population had the same age distribution as the standard European population.

¹ WHO Regional Office for Europe (2002). *The European health report 2002*. Copenhagen, WHO Regional Office for Europe:156 (<http://www.euro.who.int/europeanhealthreport>, accessed 28 May 2004).